

From: [Veal, Lee](#)
To: [Holden, Patricia](#)
Cc: [Laver, Shelley](#); [Peake, Tom](#); [Egidi, Philip](#); [Bacon, Stefanie \(she/her/hers\)](#); [Walsh, Jonathan](#)
Subject: CMS 23-000-2050
Date: Wednesday, February 22, 2023 12:09:00 PM
Attachments: [AX-23-000-2050.pdf](#)
[AX-23-000-2050.docx](#)
[AX-23-000-2050 Incoming Letter.pdf](#)
[cms_corresponse AX-23-000-2050.pdf](#)

Hi Patricia,

Here is the signed final letter, along with the CMS documents that you received originally. Could you please close this out and send the letter onward to the recipient?

Thank you, and also Shelley, Stefanie, and Phil for preparing the response.

Lee

Lee Ann B. Veal

(she/her)

Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA

202-343-9448 / 202-617-4322

www.epa.gov/radiation



Correspondence Management System

Control Number: AX-23-000-2050

Printing Date: February 13, 2023



Citizen Information

Citizen/Originator: Levinson, Sam

Organization: Rad-Labs Israel

Address: N/A

Constituent: N/A

Committee: N/A

Sub-Committee: N/A

Control Information

Control Number: AX-23-000-2050

Alternate Number: N/A

Status: Pending

Closed Date: N/A

Due Date: Feb 24, 2023

of Extensions: 1

Letter Date: Feb 1, 2023

Received Date: Feb 1, 2023

Addressee: AD-Administrator

Addressee Org: EPA

Contact Type: EML (E-Mail)

Priority Code: Normal

Signature: DX-Direct Reply

Signature Date: N/A

File Code: 401_1006_a Administrative Management - Controlled and major correspondence for employees other than senior officials

Subject: to EPA from Sam Levinson Israel 010223

Instructions: DX-Respond directly to this citizen's questions, statements, or concerns

Instruction Note: N/A

General Notes: N/A

State-Tribal CNTL: N/A

CC: OITA - Office of International and Tribal Affairs

Lead Information

Lead Author: N/A

Lead Assignments:

Assigner	Office	Assignee	Assigned Date	Due Date	Complete Date
Kristy Miller	OEX	OAR	Feb 9, 2023	Feb 24, 2023	N/A
Instruction: DX-Respond directly to this citizen's questions, statements, or concerns					
Martha Faulkner	OAR	OAR-ORIA	Feb 9, 2023	Feb 23, 2023	N/A
Instruction: DX-Respond directly to this citizen's questions, statements, or concerns					
Candice Marbury	OAR-ORIA	OAR-ORIA-RPD	Feb 13, 2023	Feb 22, 2023	N/A
Instruction: N/A					

Supporting Information

Supporting Author: N/A



Correspondence Management System

Control Number: AX-23-000-2050

Printing Date: February 13, 2023



Supporting Assignments:

Assigner	Office	Assignee	Assigned Date
No Record Found.			

History

Action By	Office	Action	Date
Kristy Miller	OEX	Control Created	Feb 1, 2023
Kristy Miller	OEX	Assign OAR as lead office	Feb 1, 2023
Martha Faulkner	OAR	Accepted the group assignment	Feb 1, 2023
Martha Faulkner	OAR	Sent to Kristy Miller for Reassignment Request	Feb 1, 2023
Kristy Miller	OEX	Request for Reassignment Approved	Feb 1, 2023
Kristy Miller	OEX	Assign OITA as lead office	Feb 1, 2023
Lakita Stewart	OITA	Accepted the group assignment	Feb 8, 2023
Lakita Stewart	OITA	Requested due date extension	Feb 8, 2023
Lakita Stewart	OITA	Sent to Kristy Miller for Reassignment Request	Feb 8, 2023
Kristy Miller	OEX	The due date extension request has been approved	Feb 9, 2023
Kristy Miller	OEX	Request for Reassignment Approved	Feb 9, 2023
Kristy Miller	OEX	Assign OAR as lead office	Feb 9, 2023
Martha Faulkner	OAR	Accepted the group assignment	Feb 9, 2023
Martha Faulkner	OAR	Assign OAR-ORIA as lead office	Feb 9, 2023
Candice Marbury	OAR-ORIA	Accepted the group assignment	Feb 13, 2023
Candice Marbury	OAR-ORIA	Assign OAR-ORIA-RPD as lead office	Feb 13, 2023

Comments

Commentator	Comment	Date
Martha Faulkner	Assign to OITA for action.	Feb 1, 2023
Lakita Stewart	Lakita's CMS was not working. It was restored today, per Bob Craine. re-requested extension date: Feb 21, 2023	Feb 8, 2023
Lakita Stewart	Per Mark Kasman in OIA: This is a technical question on radiation that should probably be routed to OAR. Thanks, Mark202-564-2024	Feb 8, 2023

Wed Feb 01 06:48:32 EST 2023
EPAExecSec <EPAExecSec@epa.gov>
FW: to EPA from Sam Levinson Israel 010223
To: "CMS.OEX" <cms.oex@epa.gov>

From: Sam Levinson <info@rad-labs.co.il>
Sent: Wednesday, February 1, 2023 2:55 AM
To: Regan, Michael <Regan.Michael@epa.gov>
Subject: to EPA from Sam Levinson Israel 010223

Hi EPA

I operate HPGe detector in my Lab (Rad-Labs Israel)

I was asked to measure a Fertilizer for Radioactivity

I found in the spectrum NORM. Especially K40 and also Th23

Is there any Standard or Instruction to compare the Bq/kg I measure, and report that what I found is OK (or not OK) to use, as it's below a certain value?

Thanks ahead

Sam Levinson

Rad-Labs Israel



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

Washington, DC 20460

February 22, 2023

OFFICE OF
AIR AND
RADIATION

Mr. Sam Levinson
info@rad-labs.co.il

Dear Mr. Levinson:

Thank you for your February 1, 2023, email to Administrator Michael S. Regan, in which you requested more information about gamma spectroscopy of fertilizer products and how to compare fertilizer samples to a baseline or benchmark level of radioactivity. I'm the Director of the Radiation Protection Division and am writing to you on Administrator Regan's behalf.

It is well known that many fertilizers have some levels of natural radioactivity. This is often related to the materials used to make fertilizer (e.g., phosphogypsum). The International Atomic Energy Agency (IAEA) maintains a Network of Environmental Management and Remediation called ENVIRONET. This network was designed for countries to share their knowledge and experience as well as to promote and facilitate collaboration. The ENVIRONET website can be accessed following this link:
<https://nucleus.iaea.org/sites/connect/environetpublic/SitePages/Home.aspx>.

A task group under ENVIRONET is the naturally occurring radioactive material (NORM) project. The NORM project was initiated with the objective to compile and share good practices and technologies in order to support Member States in (1) acquiring knowledge; (2) obtaining practical experience; and (3) implementing best practices on the sustainable management of NORM residues. It also has a task group dedicated to sampling and analysis. If you have not already done so, we recommend registering with the IAEA's ENVIRONET program, and also following-up with some of their technical experts, namely: Rafael Garcia-Tenorio Garcia Balmaseda (gtenorio@us.es) and Roman Padilla Alvarez (R.Padilla-Alvarez@iaea.org).

You may find it helpful to examine information in the IAEA's [*Application of the Concepts of Exclusion, Exemption and Clearance*](#) document. The IAEA website notes that this Safety Guide provides "guidance on the application of the concepts of exclusion, exemption and clearance as established in the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Safety Guide includes specific values for activity concentrations for both radionuclides of natural origin and those of artificial origin that may be used for bulk amounts of material for the purposes of applying the concepts of exclusion and exemption."

Additional resources that may be helpful in your work characterizing the NORM content of fertilizer include:

- Determination of Ra-226, Ra-228 and K-40 specific activities in samples of mineral fertilizer marketed in the Rio de Janeiro city:
https://inis.iaea.org/collection/NCLCollectionStore/_Public/49/049/49049061.pdf

- Validation Of ^{226}Ra , ^{228}Ra and ^{210}Pb Measurements in Soil and Sediment Samples Through High Resolution Gamma Ray Spectrometry:

https://inis.iaea.org/collection/NCLCollectionStore/_Public/45/086/45086041.pdf

Once again, thank you for taking time to write to the U.S. Environmental Protection Agency. I appreciate the opportunity to be of service and trust the information provided is helpful.

Sincerely,

Veal, Lee

Digitally signed by Veal,
Lee
Date: 2023.02.22 12:05:35
-05'00'

Lee Ann B. Veal
Director, Radiation Protection Division
Office of Radiation and Indoor Air



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

Washington, DC 20460

February 22, 2023

OFFICE OF
AIR AND
RADIATION

Mr. Sam Levinson
info@rad-labs.co.il

Dear Mr. Levinson:

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<https://nucleus.iaea.org/sites/connect/environetpublic/SitePages/Home.aspx>.

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https://inis.iaea.org/collection/NCLCollectionStore/_Public/49/049/49049061.pdf

- Validation Of ^{226}Ra , ^{228}Ra and ^{210}Pb Measurements in Soil and Sediment Samples Through High Resolution Gamma Ray Spectrometry:
https://inis.iaea.org/collection/NCLCollectionStore/_Public/45/086/45086041.pdf

Once again, thank you for taking time to write to the U.S. Environmental Protection Agency. I appreciate the opportunity to be of service and trust the information provided is helpful.

Sincerely,

Lee Ann B. Veal
Director, Radiation Protection Division
Office of Radiation and Indoor Air

From: [Egidi, Philip](#)
To: [Veal, Lee](#)
Cc: [Walsh, Jonathan](#)
Subject: RE: CMS AX-23-000-2050 Levinson due 2/24
Date: Tuesday, February 21, 2023 4:05:00 PM

It is a constraint with respect to how much radium can be in the fertilizer feedstock. Actual amounts in fertilizer are generally much lower. Note that PG has directly been used as a soil amendment which is different than feedstock into another product (Jimmy Carter and his peanut farm has a distant connection to this rule). Again, this is a lab guy in Israel asking about metrology and what to report... Copying Walsh for transparency, as it is his folder...

PVE

Philip Egidi
Environmental/Physical Scientist
U.S. Environmental Protection Agency
Radiation Protection Division
Office of Radiation and Indoor Air
Hotchkiss, CO
(202) 222-5612 (work cell)

(b) (6)



From: Veal, Lee <Veal.Lee@epa.gov>
Sent: Tuesday, February 21, 2023 1:47 PM
To: Egidi, Philip <Egidi.Philip@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: CMS AX-23-000-2050 Levinson due 2/24

Hi Phil,

That's helpful. I'll add that reference.

One question on the point of feedstock as stated here:

In the United States, there is a constraint on the amount of radium that can be used as feedstock in fertilizer; however, the U.S. constraint would not apply in other countries.

Is that statement about feedstock going into fertilizer, or about radium in fertilizer waste going into other applications? I want to be sure before making changes.

Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Egidi, Philip <Egidi.Philip@epa.gov>
Sent: Tuesday, February 21, 2023 2:41 PM
To: Veal, Lee <Veal.Lee@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: CMS AX-23-000-2050 Levinson due 2/24

"the U.S. Environmental Protection Agency issued a final rule on June 3, 1992 amending [40 CFR 61 Subpart R](#). It states that phosphogypsum intended for agricultural use must have a certified average concentration of radium-226 no greater than 0.37 Bq/g (10 pCi/g)."

I note that this is a laboratory guy asking about gamma spec, what isotopes to look for and what to report. It seems all the info provided on gamma spec peaks have been removed.

PVE

Philip Egidi
Environmental/Physical Scientist
U.S. Environmental Protection Agency
Radiation Protection Division
Office of Radiation and Indoor Air
Hotchkiss, CO
(202) 222-5612 (work cell)
(b) (6)



From: Veal, Lee <Veal.Lee@epa.gov>

Sent: Tuesday, February 21, 2023 9:28 AM

To: Laver, Shelley <Laver.Shelley@epa.gov>; Egidi, Philip <Egidi.Philip@epa.gov>

Subject: FW: CMS AX-23-000-2050 Levinson due 2/24

Hi,

One question for you.

Is there any chance that this lab is doing work for a US entity? Or for any of the PG related stuff that is coming to the US? The incoming letter is not specific.

If that's a possibility, it would be useful to add a reference to this feedstock statement:

In the United States, there is a constraint on the amount of radium that can be used as feedstock in fertilizer; however, the U.S. constraint would not apply in other countries.

Lee

Lee Ann B. Veal

(she/her)

Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA

202-343-9448 / 202-617-4322

www.epa.gov/radiation

From: Laver, Shelley <Laver.Shelley@epa.gov>

Sent: Tuesday, February 21, 2023 7:48 AM
To: Holden, Patricia <Holden.Patricia@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; White, Rick <White.Rick@epa.gov>
Subject: RE: CMS AX-23-000-2050 Levinson due 2/24

Good Morning Patricia,

I just had to make one edit this morning. Let me know if you need anything additional from us. You will see we left one notation on the document but it is more for awareness than requiring any action.

Thanks Shelley

From: Holden, Patricia <Holden.Patricia@epa.gov>
Sent: Tuesday, February 21, 2023 6:33 AM
To: Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; White, Rick <White.Rick@epa.gov>
Subject: CMS AX-23-000-2050 Levinson due 2/24

Good Morning Shelley,

A friendly reminder: A response to the attached CMS is due February 24, 2023.

Patricia

From: [J.W. Glass](#)
To: [Yeal, Lee](#)
Subject: Keeping Updated on PG Use in Roads in Florida
Date: Wednesday, March 15, 2023 12:11:38 PM

Hi Lee,

I was told you might be someone to contact regarding the use of radioactive phosphogypsum (PG) in roads and the EPA's approval of such construction projects. As you may know, there is a bill in Florida that would pave the way for use of (PG) in roads by undertaking "demonstration projects" and fast-tracking studies on suitability. A recent article noted that the EPA was "gathering information for an update on the issue."

Given the EPA's 2021 withdrawal of its 2020 conditional approval of the broad, generalized request to use PG in road construction, we want to make sure that any additional updates regarding the EPA's opinion on use is relayed to interested parties. It is our assumption that the EPA would make this information public, but just in case, please let me know if and when there are any changes, additional applications, or any other updates beyond what was communicated in the June 30th letter.

Thanks in advance,
J.W.

--

J.W. Glass
EPA Policy Specialist
Center for Biological Diversity
813-833-5301
jwglass@biologicaldiversity.org



CENTER for BIOLOGICAL DIVERSITY

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From: [Veal, Lee](#)
To: [Peake, Tom](#); [Walsh, Jonathan](#); [Schultheisz, Daniel](#)
Cc: [Laver, Shelley](#); [Bacon, Stefanie \(she/her/hers\)](#)
Subject: FW: Keeping Updated on PG Use in Roads in Florida
Date: Wednesday, March 15, 2023 2:59:00 PM

Hi CWMR,

Could you please prepare an email response for me to this inquiry? Thank you.

Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: J.W. Glass <jwglass@biologicaldiversity.org>
Sent: Wednesday, March 15, 2023 12:11 PM
To: Veal, Lee <Veal.Lee@epa.gov>
Subject: Keeping Updated on PG Use in Roads in Florida

Hi Lee,

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Thanks in advance,
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J.W. Glass
EPA Policy Specialist
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From: [Veal, Lee](#)
To: [Laver, Shelley](#); [Peake, Tom](#); [Schultheisz, Daniel](#); [White, Rick](#)
Cc: [Walsh, Jonathan](#)
Subject: FW: Keeping Updated on PG Use in Roads in Florida
Date: Thursday, March 16, 2023 10:12:00 AM

FYI – Thank you to Jon Walsh for his recommended language too!

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: J.W. Glass <jwglass@biologicaldiversity.org>
Sent: Thursday, March 16, 2023 10:10 AM
To: Veal, Lee <Veal.Lee@epa.gov>
Cc: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Keeping Updated on PG Use in Roads in Florida

Hey Lee,

Very much appreciate the well-reasoned and transparent response – it is much appreciated to both me and the various other conservation and EJ groups engaged on this issue in Florida and across the country.

Best,
J.W.

From: Veal, Lee <Veal.Lee@epa.gov>
Sent: Thursday, March 16, 2023 10:01 AM
To: J.W. Glass <jwglass@biologicaldiversity.org>
Cc: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Keeping Updated on PG Use in Roads in Florida

Good morning J.W.,

Thank you for reaching out. The Radiation Protection Division is responsible for the regulation of phosphogypsum under the Clean Air Act, which includes reviewing alternative uses of phosphogypsum, such as in construction projects as you noted.

I've only recently become aware of the proposed legislation in Florida, after receiving some press inquiries on the topic of phosphogypsum use. I am not familiar with the specific article that you quoted. Although we do our best to maintain current information related to phosphogypsum, we are not planning any programmatic or regulatory updates related to the Subpart R NESHAP regulation (40 CFR 61) at this time. Any such action would only be performed with public notice and

opportunities for comment.

Our review of any proposed projects will be performed on a case-by-case basis, using our guidance “Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR 61.206, A Workbook” (Dec. 2005).

https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seek input on the proposed decision.

Thank you for your interest in this issue. We are committed to being transparent and seeking stakeholder input into all Agency actions, and will do our best to notify you and other stakeholders directly of any future actions related to phosphogypsum management. If you have additional concerns or comments, you may directly contact Jonathan Walsh of my staff at walsh.jonathan@epa.gov.

Lee

Lee Ann B. Veal

(she/her)

Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA

202-343-9448 / 202-617-4322

www.epa.gov/radiation

From: J.W. Glass <jwglass@biologicaldiversity.org>

Sent: Wednesday, March 15, 2023 12:11 PM

To: Veal, Lee <Veal.Lee@epa.gov>

Subject: Keeping Updated on PG Use in Roads in Florida

Hi Lee,

I was told you might be someone to contact regarding the use of radioactive phosphogypsum (PG) in roads and the EPA's approval of such construction projects. As you may know, there is a bill in Florida that would pave the way for use of (PG) in roads by undertaking “demonstration projects” and fast-tracking studies on suitability. A recent article noted that the EPA was “gathering information for an update on the issue.”

Given the EPA's 2021 withdrawal of its 2020 conditional approval of the broad, generalized request to use PG in road construction, we want to make sure that any additional updates regarding the EPA's opinion on use is relayed to interested parties. It is our assumption that the EPA would make this information public, but just in case, please let me know if and when there are any changes, additional applications, or any other updates beyond what was communicated in the June 30th letter.

Thanks in advance,

J.W.

--

J.W. Glass
EPA Policy Specialist
Center for Biological Diversity
813-833-5301
jwglass@biologicaldiversity.org



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From: [Veal, Lee](#)
To: [Peake, Tom](#); [Schultheisz, Daniel](#); [Walsh, Jonathan](#)
Subject: FW: PG Pilot Update
Date: Monday, April 17, 2023 1:00:00 PM
Attachments: [image001.png](#)

Hi,

Let's set up a brief for me first, then follow on with Mosaic.
I don't know enough about the project at this point to have an external meeting. That really needs to change soon.

Lee

Lee Ann B. Veal
(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Monday, April 17, 2023 12:43 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: RE: PG Pilot Update

Thanks we may have Keith Nadasky from Mosaic join too.



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law
Practice | Co-Chair Government Relations Practice
Karen.Bennett@lewisbrisbois.com

T: 202.558.0658 F: 202.558.0654 M: 202.255.0291

2112 Pennsylvania Avenue NW, Suite 500, Washington, DC 20037 | LewisBrisbois.com

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From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Monday, April 17, 2023 12:42 PM
To: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: [EXT] RE: PG Pilot Update

Yes, I will work with Lee to set up a time.

Jon

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Monday, April 17, 2023 12:38 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: PG Pilot Update

Hi Jon,

Would you have time for a brief call – we are interested in an update on status of the technical review and determination for the Mosaic PG road project.

I have availability this week if you do

Thank you,
Karen



Karen Bennett

Partner | Co-Chair of the Environmental and Administrative Law Practice | Co-Chair Government Relations Practice

Karen.Bennett@lewisbrisbois.com

T: 202.558.0658 F: 202.558.0654 M: 202.255.0291

2112 Pennsylvania Avenue NW, Suite 500, Washington, DC 20037 | LewisBrisbois.com

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From: [Veal, Lee](#)
To: [Walsh, Jonathan](#)
Cc: [Peake, Tom](#); [Schultheisz, Daniel](#); [Rustick, Joseph](#)
Subject: RE: Mosaic completeness letter
Date: Thursday, March 16, 2023 3:00:00 PM
Attachments: [Mosaic completeness Letter 3-16-2023.docx](#) — ATTACHMENT FOIA 5: INTERNALLY DELIBERATIVE

Hi Jon,

The letter is well done. I have one edit and one insertion related to informing stakeholders. The latter is in guidance but it may be a good idea to point it out. If you're comfortable with those, please do send it on to Patricia.

Thank you for thinking of preparing this completion letter. It's a good idea.

Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Thursday, March 16, 2023 2:22 PM
To: Veal, Lee <Veal.Lee@epa.gov>
Cc: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>
Subject: Mosaic completeness letter

Lee,

The draft completeness letter is attached. It has been reviewed by Monica Gibson of ARLO and her edits accepted. If you're comfortable with the letter I will work with Ms. Patricia for final formatting and transmittal.

-Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: [Walsh, Jonathan](#)
To: [Bennett, Karen](#)
Cc: [Edwards, Jonathan](#); [Veal, Lee](#); [Peake, Tom](#); [Gibson, Monica](#)
Subject: Mosaic Pilot Project completeness determination
Date: Friday, March 17, 2023 12:47:13 PM
Attachments: [Letter Mosaic completeness 3-17-2023 signed.pdf](#)

Karen,

Attached is a letter documenting EPA's completeness determination. Patrick Kane, as the signatory of the request, is the addressee, but I am transmitting it to you as the authorized point of contact. Please let me know if you would like a physical copy and we will mail one.

As we have discussed, this is an administrative step. It is possible that I may ask for additional materials or clarifying information, but we appear to have sufficient information for a complete review at this time. I will continue to communicate the progress of our review to you.

Thank you,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

Washington, DC 20460

March 17, 2023

Mr. Patrick Kane
Vice President, Operations Services
North America
Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, Florida 33547

OFFICE OF
AIR AND
RADIATION

Dear Mr. Kane:

The U.S. Environmental Protection Agency has completed a preliminary review of Mosaic Fertilizer, LLC's "Request for Approval of Additional Uses of Phosphogypsum Pursuant to 40 CFR §61.206, Small-scale Road Pilot Project on Private Land in Florida," which was submitted to the Agency on March 31, 2022. We have also completed a preliminary review of supplemental materials related to this request submitted by Mosaic on December 22, 2022. The Agency finds that these materials, together with the information incorporated by reference, satisfy the requirements of 40 CFR §61.206(b) and therefore constitute a complete request. This letter serves as notification that EPA has reached this decision and is now starting its formal technical review of your request. During the technical review, EPA may reach out for additional information or clarification.

Once the technical review is complete, the next step in the process will be for EPA to issue a notice of pending approval or a notice of disapproval. Upon issuance of a notice of pending approval, EPA would open a public comment period on its proposed decision and directly notify stakeholders. EPA's complete process is described in Section 2.4 of the 2005 guidance document "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR 61.206, A Workbook."

If you have any questions, please contact me at (202) 343-9238 or walsh.jonathan@epa.gov.

Sincerely,

JONATHAN WALSH

Digitally signed by JONATHAN
WALSH
Date: 2023.03.17 12:24:56 -04'00'

Jonathan P. Walsh
Physical Scientist
Center for Waste Management and Regulations

cc: Electronic Distribution
Karen Bennett, Lewis Brisbois
Lee Veal, EPA
Jonathan Edwards, EPA
Tom Peake, EPA
Monica Gibson, EPA

From: [Walsh, Jonathan](#)
To: [Bennett, Karen](#)
Cc: [Veal, Lee](#)
Subject: RE: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project
Date: Tuesday, January 31, 2023 10:00:28 AM
Attachments: [image001.png](#)

Hi Karen,

We've made a lot of progress on your December submission. We have not identified any specific questions for your technical team, but we're willing to meet if there are topics you wish to discuss.

One key difference of this review process is that we are actively coordinating our review with other EPA offices who have parallel roles and authorities related to phosphogypsum reuse. I'm confident that the effort spent now will result in a stronger result.

Thanks,
Jon

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Tuesday, January 31, 2023 8:52 AM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: RE: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Good morning, Jon:

Getting back on this- are you any closer to being in a position to set up a call with the team here soon? In March it will be a full year that this request has been pending- for something that your group previously approved. As you know, Mosaic's interest is in developing appropriate alternative uses of PG as a means of addressing the stack -related issues we all recognize. Is there a stumbling block that we are not appreciating? Please let me know status of your review as I would like to report back to the group.

Thank you,
Karen



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law Practice | Co-Chair Government Relations Practice
Karen.Bennett@lewisbrisbois.com

T: 202.558.0658 F: 202.558.0654 M: 202.255.0291

2112 Pennsylvania Avenue NW, Suite 500, Washington, DC 20037 | LewisBrisbois.com

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From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Wednesday, January 11, 2023 6:38 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: RE: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Hi Jonathan,

Happy New Year! I hope you enjoyed the holidays. I am checking in with you on the status of your review of the additional information – will you and your team be ready to set up a call sometime soon?

Thanks,
Karen



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law Practice | Co-Chair Government Relations Practice
Karen.Bennett@lewisbrisbois.com
T: 202.558.0658 F: 202.558.0654 M: 202.255.0291

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From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Thursday, December 22, 2022 1:18 PM
To: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: [EXT] RE: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Thanks Karen. It's evident that a lot of effort went into these responses.

I'm finishing work up right now, and will be back in the office on January 3. Enjoy your holidays, and we will talk then.

Take care,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Thursday, December 22, 2022 10:01 AM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Hi Jonathan,
Please find Mosaic's response to EPA's request for additional information needed to

complete review of our proposed small-scale pilot project. Feel free to contact me with any questions. I will reach out in the new year to schedule a follow-up meeting with you and your team.

Happy holidays!

Karen



Karen Bennett

Partner | Co-Chair of the Environmental and Administrative Law Practice | Co-Chair Government Relations Practice

Karen.Bennett@lewisbrisbois.com

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From: [Walsh, Jonathan](#)
To: [Bennett, Karen](#)
Cc: [Veal, Lee](#)
Subject: RE: PG Pilot Update
Date: Monday, April 17, 2023 12:42:03 PM
Attachments: [image001.png](#)

Yes, I will work with Lee to set up a time.

Jon

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Monday, April 17, 2023 12:38 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: PG Pilot Update

Hi Jon,

Would you have time for a brief call – we are interested in an update on status of the technical review and determination for the Mosaic PG road project.

I have availability this week if you do

Thank you,
Karen



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law Practice | Co-Chair Government Relations Practice
Karen.Bennett@lewisbrisbois.com

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From: [Bennett, Karen](#)
To: [Walsh, Jonathan](#)
Cc: [Veal, Lee](#)
Subject: Re: [EXT] RE: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project
Date: Tuesday, January 31, 2023 11:28:13 AM
Attachments: [image001.png](#)
[Logo_e6253148-26a1-47a9-b861-6ac0ff0bc3c4.png](#)

Sounds good. No need to meet unless we can be helpful. Any idea on timing?

Thanks so much!



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law
Practice | Co-Chair Government Relations Practice
Karen.Bennett@lewisbrisbois.com

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On Jan 31, 2023, at 10:00 AM, Walsh, Jonathan <Walsh.Jonathan@epa.gov> wrote:

Hi Karen,

We've made a lot of progress on your December submission. We have not identified any specific questions for your technical team, but we're willing to meet if there are topics you wish to discuss.

One key difference of this review process is that we are actively coordinating our review with other EPA offices who have parallel roles and authorities related to phosphogypsum reuse. I'm confident that the effort spent now will result in a stronger result.

Thanks,
Jon

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Tuesday, January 31, 2023 8:52 AM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: RE: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Good morning, Jon:

Getting back on this- are you any closer to being in a position to set up a call with the team here soon? In March it will be a full year that this request has been pending- for something that your group previously approved. As you know, Mosaic's interest is in developing appropriate alternative uses of PG as a means of addressing the stack - related issues we all recognize. Is there a stumbling block that we are not appreciating? Please let me know status of your review as I would like to report back to the group.

Thank you,
Karen

Karen Bennett

Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Thursday, December 22, 2022 10:01 AM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: Mosaic Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Hi Jonathan,

Please find Mosaic's response to EPA's request for additional information needed to complete review of our proposed small-scale pilot project. Feel free to contact me with any questions. I will reach out in the new year to schedule a follow-up meeting with you and your team.

Happy holidays!

Karen

<image001.png>

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From: [Nesky, Anthony](#)
To: [Stevens, Katherine](#)
Cc: [Veal, Lee](#); [Laver, Shelley](#); [Schultheisz, Daniel](#); [Walsh, Jonathan](#); [Peake, Tom](#); [Lee, Raymond](#)
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION) RPD-approved answer enclosed--must also be cleared with OLEM and OCSPP
Date: Wednesday, March 1, 2023 2:22:02 PM
Importance: High

Dear Katie:

The RPD-part of the answer to Politico is below. Please note that OLEM and OCSPP were petitioned to take action on phosphogypsum under RCRA and TSCA, respectively. Therefore, they will need to clear the last, highlighted sentence in the response.

Tony Nesky
Center for Radiation Information and Outreach
Tel: 202-343-9597
nesky.tony@epa.gov

Questions from Politico: What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects Has there been a determination since then that the material is a threat to water and human health?

RPD Approved Answer-Clear Highlighted sentence with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.

From: Lee, Raymond <Lee.Raymond@epa.gov>
Sent: Wednesday, March 1, 2023 1:06 PM
To: Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>

Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION)

We have an inquiry from someone at Politico. See the chain below!

From: Stevens, Katherine <stevens.katherine@epa.gov>

Sent: Wednesday, March 1, 2023 1:02 PM

To: Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>

Cc: Lee, Raymond <Lee.Raymond@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>

Subject: RE: Politico 3 PM DDL- phosphogypsum

Looping in RPD.

From: Powell, Shayla <Powell.Shayla@epa.gov>

Sent: Wednesday, March 1, 2023 12:59 PM

To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>

Subject: FW: Politico 3 PM DDL- phosphogypsum

Importance: High

Good afternoon, OAR,

Please see the below inquiry. Not sure who in ORIA to include. Cathy is following up with the reporter to see if there is any wiggle room with the deadline. Thanks!

Hello Matt, Trish and Shayla,

Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

Incoming:

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Milbourn, Cathy <Milbourn.Cathy@epa.gov>
Sent: Wednesday, March 1, 2023 12:52 PM
To: Colip, Matthew <colip.matthew@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Taylor, Trish <Taylor.Trish@epa.gov>
Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum
Importance: High

Hello Matt, Trish and Shayla,

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Incoming:

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

From: Bruce Ritchie <britchie@politico.com>
Sent: Wednesday, March 1, 2023 12:08 PM
To: EPA Press Office <Press@epa.gov>
Cc: Milbourn, Cathy <Milbourn.Cathy@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>
Subject: Phosphogypsum

Hi Cathy and Shayla and others! I'm not sure who deals with the topic of phosphogypsum in roadways.

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Thanks! Can you get back to me by 3? Please acknowledge receipt of this email.

From: Bruce Ritchie britchie@politico.com

Sent: Wednesday, March 1, 2023 12:08 PM

To: EPA Press Office Press@epa.gov

Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov; Powell, Shayla Powell.Shayla@epa.gov

Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

britchie@politico.com

Twitter: @bruceritchie

From: [Veal, Lee](#)
To: [Edwards, Jonathan](#)
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION) RPD-approved answer enclosed--must also be cleared with OLEM and OCSPP
Date: Wednesday, March 1, 2023 4:40:00 PM

Hi Jon,

For your awareness, we received a Politico press inquiry on phosphogypsum. It had a short deadline, today at 4pm. Here is the response for our part, which will need to be coupled with the OCSPP and OLEM responses by the OPA.

Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA

202-343-9448 / 202-617-4322

www.epa.gov/radiation

From: Nesky, Anthony <Nesky.Tony@epa.gov>
Sent: Wednesday, March 1, 2023 2:22 PM
To: Stevens, Katherine <stevens.katherine@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION) RPD-approved answer enclosed--must also be cleared with OLEM and OCSPP
Importance: High

Dear Katie:

The RPD-part of the answer to Politico is below. Please note that OLEM and OCSPP were petitioned to take action on phosphogypsum under RCRA and TSCA, respectively. Therefore, they will need to clear the last, highlighted sentence in the response.

Tony Nesky
Center for Radiation Information and Outreach
Tel: 202-343-9597
nesky.tony@epa.gov

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RPD Approved Answer-Clear Highlighted sentence with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.

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Sent: Wednesday, March 1, 2023 12:59 PM

To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>

Subject: FW: Politico 3 PM DDL- phosphogypsum

Importance: High

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Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

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(Mobile) 202-573-5349

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Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum
Importance: High

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To: EPA Press Office Press@epa.gov

Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov; Powell, Shayla Powell.Shayla@epa.gov

Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

britchie@politico.com

Twitter: @bruceritchie

From: [Nesky, Anthony](#)
To: [Laver, Shelley](#); [Veal, Lee](#)
Cc: [Schultheisz, Daniel](#); [Lee, Raymond](#); [Walsh, Jonathan](#)
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION)--Dan's approved draft deliberative answer attached for your edits/approval
Date: Wednesday, March 1, 2023 2:00:47 PM
Importance: High

DRAFT DELIBERATIVE

Dear Shelley and Lee;

Dan and I came up with the following answer for your edits/approval. Please note that the deadline was extended to 4PM, and the highlighted sentence will need to be cleared by OLEM and OSCPP:

Q.What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects Has there been a determination since then that the material is a threat to water and human health?

Tony and Dan's Draft Answer—Clear Highlighted Text with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). **EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.**

Background for RPD Management: OLEM and OSCPP were petitioned to take action on phosphogypsum under RCRA and TSCA, respectively.

Tony

From: Lee, Raymond <Lee.Raymond@epa.gov>
Sent: Wednesday, March 1, 2023 1:42 PM
To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)

Just FYI – the reporter extended the deadline to 4 PM today.

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Sent: Wednesday, March 1, 2023 1:39 PM
To: Lee, Raymond <Lee.Raymond@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)

Sorry, that should be 206(b).

From: Schultheisz, Daniel
Sent: Wednesday, March 1, 2023 1:35 PM
To: Lee, Raymond <Lee.Raymond@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)

Including Jon Walsh, who was running a workgroup meeting when this came through.

Just chatted with Lee. Here is a suggested response. Feel free to massage.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under 40 CFR 61.206(c). The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in 40 CFR 61.206 and Agency guidelines (86 FR 35795, July 7, 2021). Approval of proposed uses require that the risk associated with the proposed use be no greater than the risk of leaving the phosphogypsum in a stack. EPA has made no broader determination regarding the public health or environmental impacts associated with the use of phosphogypsum.

From: Lee, Raymond <Lee.Raymond@epa.gov>
Sent: Wednesday, March 1, 2023 1:06 PM
To: Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION)

We have an inquiry from someone at Politico. See the chain below!

From: Stevens, Katherine <stevens.katherine@epa.gov>

Sent: Wednesday, March 1, 2023 1:02 PM

To: Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>

Cc: Lee, Raymond <Lee.Raymond@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>

Subject: RE: Politico 3 PM DDL- phosphogypsum

Looping in RPD.

From: Powell, Shayla <Powell.Shayla@epa.gov>

Sent: Wednesday, March 1, 2023 12:59 PM

To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>

Subject: FW: Politico 3 PM DDL- phosphogypsum

Importance: High

Good afternoon, OAR,

Please see the below inquiry. Not sure who in ORIA to include. Cathy is following up with the reporter to see if there is any wiggle room with the deadline. Thanks!

Hello Matt, Trish and Shayla,

Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

Incoming:

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Milbourn, Cathy <Milbourn.Cathy@epa.gov>
Sent: Wednesday, March 1, 2023 12:52 PM
To: Colip, Matthew <colip.matthew@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Taylor, Trish <Taylor.Trish@epa.gov>
Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum
Importance: High

Hello Matt, Trish and Shayla,

Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

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What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

From: Bruce Ritchie <britchie@politico.com>
Sent: Wednesday, March 1, 2023 12:08 PM
To: EPA Press Office <Press@epa.gov>
Cc: Milbourn, Cathy <Milbourn.Cathy@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>
Subject: Phosphogypsum

Hi Cathy and Shayla and others! I'm not sure who deals with the topic of phosphogypsum in roadways.

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Thanks! Can you get back to me by 3? Please acknowledge receipt of this email.

From: Bruce Ritchie <britchie@politico.com>
Sent: Wednesday, March 1, 2023 12:08 PM
To: EPA Press Office <Press@epa.gov>

Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov; Powell, Shayla Powell.Shayla@epa.gov
Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

britchie@politico.com

Twitter: @bruceritchie

From: [Veal, Lee](#)
To: [Schultheisz, Daniel](#)
Subject: RE: Follow-up: Politico - phosphogypsum
Date: Thursday, March 2, 2023 1:02:00 PM

I think that is fine.

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Sent: Thursday, March 2, 2023 1:01 PM
To: Veal, Lee <Veal.Lee@epa.gov>
Subject: FW: Follow-up: Politico - phosphogypsum

Here's what we discussed. Any concerns after seeing it in print?

From: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Sent: Thursday, March 2, 2023 12:46 PM
To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Subject: RE: Follow-up: Politico - phosphogypsum

Any update on this response getting approval to send forward?

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Sent: Thursday, March 2, 2023 12:13 PM
To: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Rustick, Joseph <rustick.joseph@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>
Subject: RE: Follow-up: Politico - phosphogypsum

Lee did not think we could say we have not received a request. She agreed with this general suggested response:

EPA has received a request to approve use of phosphogypsum and is working with the requestor to resolve questions before beginning its technical review. As described in EPA's 2005 workbook, the Agency will provide an opportunity for public review and comment if it proposes to approve the request. See https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf.

Any thoughts or concerns?

From: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Sent: Thursday, March 2, 2023 10:59 AM
To: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Rustick, Joseph <rustick.joseph@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>
Subject: FW: Follow-up: Politico - phosphogypsum

Dan/Jon

Could you please reply to the follow-up question from Politico? I'm happy to communicate any response, or you could loop in the full CC list below.

From: Powell, Shayla <Powell.Shayla@epa.gov>
Sent: Thursday, March 2, 2023 10:33 AM
To: Stevens, Katherine <stevens.katherine@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Subject: Follow-up: Politico - phosphogypsum

Hi Kati, Team,

Please see the follow-up question below. Thanks!

Has the EPA received a petition to use phosphogypsum since The Fertilizer Institute request was denied?

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Stevens, Katherine <stevens.katherine@epa.gov>
Sent: Wednesday, March 1, 2023 2:28 PM
To: Powell, Shayla <Powell.Shayla@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Subject: RE: Politico 4 PM DDL- phosphogypsum

The RPD-part of the answer to Politico is below. Please note that OLEM and OCSPP were petitioned

to take action on phosphogypsum under RCRA and TSCA, respectively. Therefore, they will need to clear the last, highlighted sentence in the response.

Questions from Politico: What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects Has there been a determination since then that the material is a threat to water and human health?

RPD Approved Answer-Clear Highlighted sentence with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.

From: Powell, Shayla <Powell.Shayla@epa.gov>

Sent: Wednesday, March 1, 2023 1:32 PM

To: Lee, Raymond <Lee.Raymond@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>

Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>

Subject: RE: Politico 4 PM DDL- phosphogypsum

Thanks! The reporter extended the deadline to 4PM today.

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

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To: Stevens, Katherine <stevens.katherine@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>

Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>

Subject: RE: Politico 3 PM DDL- phosphogypsum

Thanks Kati! I've forwarded to the appropriate folks in RPD. We'll be in touch.

From: Stevens, Katherine <stevens.katherine@epa.gov>

Sent: Wednesday, March 1, 2023 1:02 PM

To: Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>

Cc: Lee, Raymond <Lee.Raymond@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>

Subject: RE: Politico 3 PM DDL- phosphogypsum

Looping in RPD.

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To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>

Subject: FW: Politico 3 PM DDL- phosphogypsum

Importance: High

Good afternoon, OAR,

Please see the below inquiry. Not sure who in ORIA to include. Cathy is following up with the reporter to see if there is any wiggle room with the deadline. Thanks!

Hello Matt, Trish and Shayla,

Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

Incoming:

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Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Milbourn, Cathy <Milbourn.Cathy@epa.gov>
Sent: Wednesday, March 1, 2023 12:52 PM
To: Colip, Matthew <colip.matthew@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Taylor, Trish <Taylor.Trish@epa.gov>
Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum
Importance: High

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To: EPA Press Office <Press@epa.gov>
Cc: Milbourn, Cathy <Milbourn.Cathy@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>
Subject: Phosphogypsum

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What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Thanks! Can you get back to me by 3? Please acknowledge receipt of this email.

From: Bruce Ritchie britchie@politico.com

Sent: Wednesday, March 1, 2023 12:08 PM

To: EPA Press Office Press@epa.gov

Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov; Powell, Shayla Powell.Shayla@epa.gov

Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

britchie@politico.com

Twitter: @bruceritchie

From: Deluca, Isabel
To: Nesky, Anthony; Powell, Shayla; Millett, John; Stevens, Katherine; Beck, Laura (she/her/hers); Bacon, Stefanie (she/her/hers)
Cc: Veal, Lee; Yale, Kenneth; Peake, Tom; Schultheisz, Daniel; Walsh, Jonathan; Laver, Shelley
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--RPD Approved Response Attached
Date: Thursday, March 30, 2023 5:20:22 PM

Thanks, Tony – looks good to me.

From: Nesky, Anthony <Nesky.Tony@epa.gov>
Sent: Thursday, March 30, 2023 5:18 PM
To: Deluca, Isabel <DeLuca.Isabel@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Yale, Kenneth <yale.kenneth@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--RPD Approved Response Attached

Here is RPDs approved response to the inquiry from Fresh Take Florida.

Question: My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

RPD-Approved Response

Thank you for reaching out. The EPA is responsible for the regulation of phosphogypsum under the Clean Air Act, which includes reviewing alternative uses of phosphogypsum, such as in construction projects as you noted. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR Part 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seek input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis. EPA is not planning any programmatic or regulatory updates related to the Subpart R NESHAP at this time, but we do our best to

maintain current information related to phosphogypsum.

Tony Nesky
Center for Radiation Information and Outreach
Tel: 202-343-9597
nesky.tony@epa.gov

From: Deluca, Isabel <DeLuca.Isabel@epa.gov>
Sent: Monday, March 27, 2023 5:14 PM
To: Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum

Thanks, adding Stephanie and Tony.

From: Powell, Shayla <Powell.Shayla@epa.gov>
Sent: Monday, March 27, 2023 4:26 PM
To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Subject: FW: Media Inquiry from Fresh Take Florida - Phosphogypsum

Good afternoon, OAR,

Please see the below inquiry. Thanks!

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Lucille Lannigan <llannigan@freshtakeflorida.com>
Sent: Monday, March 27, 2023 1:44 PM
To: Powell, Shayla <Powell.Shayla@epa.gov>; EPA Press Office <Press@epa.gov>
Subject: Media Inquiry from Fresh Take Florida

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I have been directed to complete this story by the end of this week.

Thank you for your consideration, and I look forward to hearing from you.

Best,

Lucille Lannigan

Lucille Lannigan

Fresh Take Florida | WUFT News

(305) 780-9842 | llannigan@freshtakeflorida.com

From: [Powell, Shayla](#)
To: [DeLuca, Isabel](#); [Nesky, Anthony](#); [Millett, John](#); [Stevens, Katherine](#); [Beck, Laura \(she/her/hers\)](#); [Bacon, Stefanie \(she/her/hers\)](#)
Cc: [Veal, Lee](#); [Yale, Kenneth](#); [Peake, Tom](#); [Schultheisz, Daniel](#); [Walsh, Jonathan](#); [Laver, Shelley](#)
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--RPD Approved Response Attached
Date: Friday, March 31, 2023 10:50:31 AM

Thanks all!

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Deluca, Isabel <DeLuca.Isabel@epa.gov>
Sent: Thursday, March 30, 2023 5:20 PM
To: Nesky, Anthony <Nesky.Tony@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
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Center for Radiation Information and Outreach
Tel: 202-343-9597
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From: Powell, Shayla <Powell.Shayla@epa.gov>
Sent: Monday, March 27, 2023 4:26 PM
To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>

Subject: FW: Media Inquiry from Fresh Take Florida - Phosphogypsum

Good afternoon, OAR,

Please see the below inquiry. Thanks!

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Lucille Lannigan <llannigan@freshtakeflorida.com>

Sent: Monday, March 27, 2023 1:44 PM

To: Powell, Shayla <Powell.Shayla@epa.gov>; EPA Press Office <Press@epa.gov>

Subject: Media Inquiry from Fresh Take Florida

Good afternoon,

My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

I have been directed to complete this story by the end of this week.

Thank you for your consideration, and I look forward to hearing from you.

Best,
Lucille Lannigan

Lucille Lannigan

Fresh Take Florida | WUFT News

(305) 780-9842 | llannigan@freshtakeflorida.com

From: [Schultheisz, Daniel](#)
To: [Lee, Raymond](#); [Nesky, Anthony](#); [Laver, Shelley](#)
Cc: [Veal, Lee](#); [Peake, Tom](#); [Walsh, Jonathan](#)
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)
Date: Wednesday, March 1, 2023 1:35:05 PM

Including Jon Walsh, who was running a workgroup meeting when this came through.

Just chatted with Lee. Here is a suggested response. Feel free to massage.

FOIA 5 INTERNALLY DELIBERATIVE
EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under 40 CFR 61.206(c). The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in 40 CFR 61.206 and Agency guidelines (86 FR 35795, July 7, 2021). Approval of proposed uses require that the risk associated with the proposed use be no greater than the risk of leaving the phosphogypsum in a stack. EPA has made no broader determination regarding the public health or environmental impacts associated with the use of phosphogypsum.

From: Lee, Raymond <Lee.Raymond@epa.gov>
Sent: Wednesday, March 1, 2023 1:06 PM
To: Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION)

We have an inquiry from someone at Politico. See the chain below!

From: Stevens, Katherine <stevens.katherine@epa.gov>
Sent: Wednesday, March 1, 2023 1:02 PM
To: Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Lee, Raymond <Lee.Raymond@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum

Looping in RPD.

From: Powell, Shayla <Powell.Shayla@epa.gov>
Sent: Wednesday, March 1, 2023 12:59 PM
To: Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>
Subject: FW: Politico 3 PM DDL- phosphogypsum
Importance: High

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Please see the below inquiry. Not sure who in ORIA to include. Cathy is following up with the reporter to see if there is any wiggle room with the deadline. Thanks!

Hello Matt, Trish and Shayla,

Trish — can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

Incoming:

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Milbourn, Cathy <Milbourn.Cathy@epa.gov>

Sent: Wednesday, March 1, 2023 12:52 PM

To: Colip, Matthew <colip.matthew@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Taylor, Trish <Taylor.Trish@epa.gov>

Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum

Importance: High

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From: Bruce Ritchie <[britchie@politico.com](mailto:britchier@politico.com)>

Sent: Wednesday, March 1, 2023 12:08 PM

To: EPA Press Office <Press@epa.gov>

Cc: Milbourn, Cathy <Milbourn.Cathy@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>

Subject: Phosphogypsum

Hi Cathy and Shayla and others! I'm not sure who deals with the topic of phosphogypsum in roadways.

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

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To: EPA Press Office Press@epa.gov

Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov; Powell, Shayla Powell.Shayla@epa.gov

Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

[britchie@politico.com](mailto:britchier@politico.com)

Twitter: @bruceritchie

From: [Veal, Lee](#)
To: [Lee, Raymond](#); [Nesky, Anthony](#); [Laver, Shelley](#)
Cc: [Peake, Tom](#); [Schultheisz, Daniel](#)
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)
Date: Wednesday, March 1, 2023 1:22:00 PM

Hi,

Dan is going to draft some language that may be helpful here. We'll have our CRIO general shortly and can talk further before sending something forward.

If you'd like to let them know we can share draft language, Kati may find that helpful.

Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

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Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION)

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Subject: FW: Politico 3 PM DDL- phosphogypsum

Importance: High

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(Mobile) 202-573-5349

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Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum

Importance: High

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Subject: Phosphogypsum

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What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Thanks! Can you get back to me by 3? Please acknowledge receipt of this email.

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To: EPA Press Office Press@epa.gov

Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov; Powell, Shayla Powell.Shayla@epa.gov

Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

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britchie@politico.com

Twitter: @bruceritchie

From: [Veal, Lee](#)
To: [Walsh, Jonathan](#); [Nesky, Anthony](#); [Laver, Shelley](#)
Cc: [Schultheisz, Daniel](#); [Lee, Raymond](#)
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)--Dan's approved draft deliberative answer attached for your edits/approval
Date: Wednesday, March 1, 2023 2:26:00 PM

Hi,

I think that the TSCA decision was under OCSPP, Brooke Porter is listed as the POC. We should point out that office to Kati---they may not have been in the original distribution.

OLEM and OAR were on what I saw.

Good catch Jon W!

Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Wednesday, March 1, 2023 2:23 PM
To: Veal, Lee <Veal.Lee@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)--Dan's approved draft deliberative answer attached for your edits/approval

Just concurring that the response looks good.

As further background information, EPA denied the petition to regulate phosphogypsum reuse as a significant new use under TSCA Section 21:
<https://www.federalregister.gov/documents/2021/05/21/2021-09998/petition-for-rulemaking-under-tsca-reasons-for-agency-response-denial-of-requested-rulemaking> I'm not sure whether or how the other TSCA and RCRA petitions were resolved. I'm glad today's response will be reviewed by those respective offices.

Jon

From: Veal, Lee <Veal.Lee@epa.gov>

Sent: Wednesday, March 1, 2023 2:14 PM

To: Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>

Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)--Dan's approved draft deliberative answer attached for your edits/approval

Tony,

Nicely done. I agree with the idea of leaving out the detailed reference on the rule, it is indeed in Subpart R.

CRIO can send forward to Katy (OAR Comms).

Lee

Lee Ann B. Veal

(she/her)

Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA

202-343-9448 / 202-617-4322

www.epa.gov/radiation

From: Nesky, Anthony <Nesky.Tony@epa.gov>

Sent: Wednesday, March 1, 2023 2:01 PM

To: Laver, Shelley <Laver.Shelley@epa.gov>; Veal, Lee <Veal.Lee@epa.gov>

Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Subject: FW: Politico 3 PM DDL- phosphogypsum (ACTION)--Dan's approved draft deliberative answer attached for your edits/approval

Importance: High

DRAFT DELIBERATIVE

Dear Shelley and Lee;

Dan and I came up with the following answer for your edits/approval. Please note that the deadline was extended to 4PM, and the highlighted sentence will need to be cleared by OLEM and OSCPP:

Q.What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects
Has there been a determination since then that the material is a threat to water and human health?

Tony and Dan's Draft Answer—Clear Highlighted Text with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions

of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.

Background for RPD Management: OLEM and OCSP were petitioned to take action on phosphogypsum under RCRA and TSCA, respectively.

Tony

From: Lee, Raymond <Lee.Raymond@epa.gov>
Sent: Wednesday, March 1, 2023 1:42 PM
To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)

Just FYI – the reporter extended the deadline to 4 PM today.

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Sent: Wednesday, March 1, 2023 1:39 PM
To: Lee, Raymond <Lee.Raymond@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum (ACTION)

Sorry, that should be 206(b).

From: Schultheisz, Daniel
Sent: Wednesday, March 1, 2023 1:35 PM
To: Lee, Raymond <Lee.Raymond@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
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Including Jon Walsh, who was running a workgroup meeting when this came through.

Just chatted with Lee. Here is a suggested response. Feel free to massage.

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Importance: High

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Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

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Importance: High

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Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

britchie@politico.com

Twitter: @bruceritchie

From: [Crossland, Andy](#)
To: [Veal, Lee](#); [Walsh, Jonathan](#)
Cc: [Atagi, Tracy](#); [Young, Jessica](#); [DeRobertis, Cecilia](#)
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?
Date: Tuesday, April 11, 2023 4:06:30 PM

Lee and Jonathan,

Hello! We wanted to give you a heads up that our acting AA Barry Breen has asked us to respond to a concerned citizen who is asking about use of coal combustion residues and phosphogypsum in road construction. (see email chain below) We've drafted a response that includes some discussion of Subpart R as well as the RCRA program, keeping it focused on the publicly available information on the EPA website.

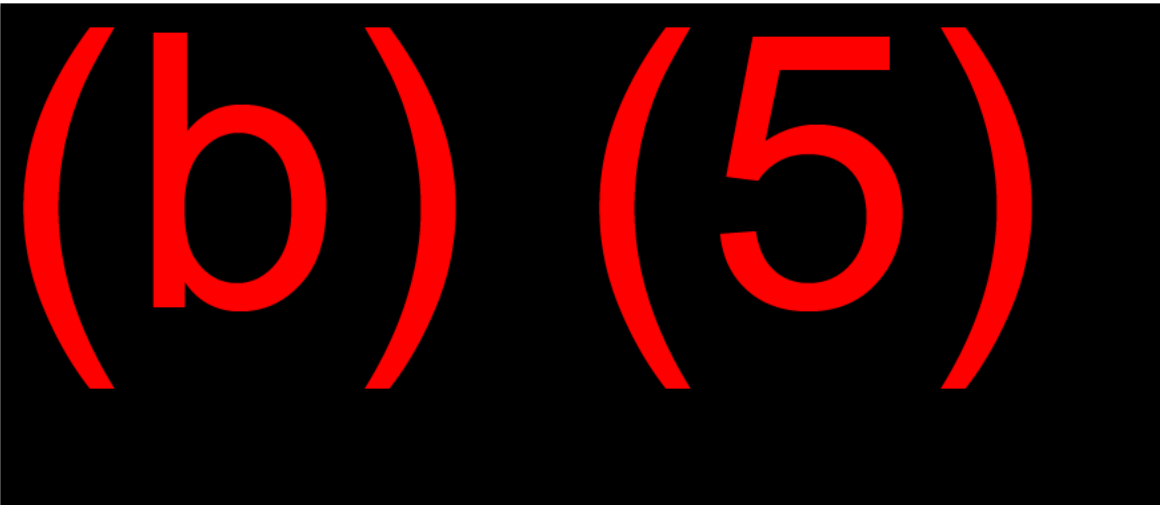
We've been asked to provide a response by Friday 04/14 (extended from 04/07), so please let us know if you have any concerns about the response by Thursday 04/13 if possible.

Also, Lee, let me know when you are back and we should set up a time to talk about ORCR thoughts on your rulemaking effort.

Many thanks,
Andy

DRAFT RESPONSE TO BE SENT BY CAROLYN HOSKINSON

Thank you for your recent email to Barry Breen on the use of phosphogypsum and coal combustion residues in road construction. He has asked that my office respond on his behalf.



EPA has previously evaluated multiple uses of coal ash using the methodology above, including use of fly ash in concrete and use of flue gas desulfurization gypsum in wallboard and as an agricultural amendment. Further information about these and other potential uses of coal ash can be found [here](#).

(b) (5)

Again, thank you for your interest in this important environmental issue.

Andy Crossland (he/him/his)
Director, Materials Recovery and Waste Management Division
Office of Resource Conservation and Recovery
Office of Land and Emergency Management
(202) 853-4459
Crossland.andy@epa.gov

From: Krejcik, Krystal <krejcik.krystal@epa.gov>
Sent: Thursday, March 30, 2023 4:22 PM
To: Villamizar, Nicole (she/her/hers) <Villamizar.Nicole@epa.gov>; Crossland, Andy <Crossland.Andy@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>; Suarez, Lana (she/her/hers) <Suarez.Lana@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>
Cc: OLEM ORCR IO <OLEMORCRIO@epa.gov>; Shaw, Nena <Shaw.Nena@epa.gov>
Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi all,

Please see the incoming message below regarding concerns from a stakeholder about Phosphogypsum use in roads. OLEM has requested ORCR respond on Barry's behalf so would folks please work together as appropriate to prepare a draft response to share with the ORCR IO?

As you may recall, a stakeholder reached out to Carlton inquiring about Phosphogypsum last December. (See attached.) I couldn't find an official response so am thinking that maybe this fell through the cracks between coordination with OAR and the holidays but hopefully there was already something started that folks can pull from?

While there is not a hard deadline, would this be something that folks could draft by **COB April 7th**? If you need additional time just let us know as we can be flexible on this one, but we would like to be relatively timely since we didn't get back to them the first time so keep us posted! Let me and

Andrew if there are any questions or concerns. Thank you!

Best,
Krystal

Krystal Krejcik

Sr. Special Assistant
Office of Resource Conservation and Recovery
Office of Land and Emergency Management
U.S. Environmental Protection Agency
Cell: (703) 719-1176

From: Hilosky, Nick (he/him/his) <Hilosky.Nick@epa.gov>
Sent: Thursday, March 30, 2023 2:57 PM
To: Krejcik, Krystal <krejcik.krystal@epa.gov>; Mack, Andrew <mack.andrew@epa.gov>
Cc: Brooks, Becky <Brooks.Bekky@epa.gov>
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi Krystal and Andrew,
This came in to Barry...is this something someone in ORCR can respond to? I am not sure about her reference to Carlton – or if anyone has responded previously, but this is the first time that I have seen an incoming from this particular person.

Nick

Nicholas J. Hilosky
Acting Chief of Staff
Office of Land and Emergency Management
US Environmental Protection Agency
ph: 202-566-1942; mobile: 202-368-0724

From: Shannon Ansley <anslshan59@gmail.com>
Sent: Thursday, March 30, 2023 1:17 PM
To: Breen, Barry <Breen.Barry@epa.gov>
Subject: Phosphogypsum (and coal fly ash) on roads. How can this be?

Good morning, Mr. Breen.
As you know, using phosphogypsum in road construction has been banned by EPA because of its toxicity, radioactivity, and leachability. However, in Florida the current legislature is voting to approve use of phosphogypsum and coal-produced fly ash in construction of roads in Florida. Is there a way to stop this? If it passes in Florida, other states will likely follow, especially Idaho. Can the EPA please do something?

I just learned that Dr. Waterhouse is no longer with EPA and had been keeping him informed on issues with phosphogypsum and fertilizer production around the country.

Best regards,
Shannon Ansley
Pocatello, Idaho
208-220-2851

--

Shannon

I acknowledge that I am living within the boundaries of the original Fort Hall Reservation on the traditional lands of the Shoshone and Bannock peoples.

From: [Veal, Lee](#)
To: [Peake, Tom](#); [Schultheisz, Daniel](#); [Walsh, Jonathan](#); [White, Rick](#)
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?
Date: Thursday, April 13, 2023 3:48:00 PM

FYI

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Atagi, Tracy <Atagi.Tracy@epa.gov>
Sent: Thursday, April 13, 2023 3:31 PM
To: OLEM ORCR IO <OLEMORCRIO@epa.gov>
Cc: DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>; Villamizar, Nicole (she/her/hers) <Villamizar.Nicole@epa.gov>; Mills, Jason <Mills.Jason@epa.gov>; Birchfield, Norman <Birchfield.Norman@epa.gov>; Huggins, Richard <Huggins.Richard@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>; Russell, Bethany <Russell.Bethany@epa.gov>; Suarez, Lana (she/her/hers) <Suarez.Lana@epa.gov>; Young, Jessica <Young.Jessica@epa.gov>; Veal, Lee <Veal.Lee@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Crossland, Andy <Crossland.Andy@epa.gov>
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi Carolyn –

Andy asked me to send you the draft response to Shannon Ansley, the concerned citizen who emailed Barry about the use of coal combustion residues and phosphogypsum in road construction. She is particularly concerned about Florida's legislative activity to allow phosphogypsum use in roadways. In our response, we tried to make it clear that in general, states are the primary authority for solid waste beneficial use determinations, but for phosphogypsum, EPA approval is also needed under Subpart R of the Clean Air Act.

This draft response was truly a team effort, with MRWMD, RCSD, and ERAS all contributing. In addition, our colleagues in OAR provided language for the Subpart R program discussion.

Please let us know if you'd like to discuss further.

DRAFT RESPONSE

Thank you for your recent email to Barry Breen on the use of phosphogypsum and coal combustion residues in road construction. He has asked that my office respond on his behalf.

Under RCRA Subtitle D, states have the primary authority to implement and enforce standards for management of solid wastes, including whether or not to allow a proposed beneficial use. EPA developed the "[Methodology for Evaluating the Beneficial Use of Industrial Non-Hazardous](#)

[Secondary Materials](#)” to aid states and others in making these decisions. As part of that document, EPA defined beneficial use as the substitution of a non-hazardous industrial material, either as generated or following additional processing, for some or all of the virgin, raw materials in a natural or commercial product in a way that provides a functional benefit, meets relevant product specifications, and does not pose concerns to human health or the environment. (Note that the “non-hazardous” designation is based on a material’s regulatory status. Non-hazardous materials may still pose risk). Uses that do not meet these criteria may be considered improper disposal of a solid waste and federal action could be taken if there were a finding of imminent or substantial endangerment, even in cases where the state has determined the material to not be subject to state regulation.

EPA has previously evaluated multiple uses of coal ash using the methodology above, including use of fly ash in concrete and use of flue gas desulfurization gypsum in wallboard and as an agricultural amendment. Further information about these and other potential uses of coal ash can be found [here](#).

Phosphogypsum is unique among solid wastes in that it is separately regulated under Subpart R of the Clean Air Act. These regulations require that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA’s responsibility for regulation of phosphogypsum under the Clean Air Act includes reviewing alternative uses of phosphogypsum, such as in construction projects. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance “Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR Part 61.206, A Workbook” (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seek input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis.

Again, thank you for your interest in this important environmental issue.

From: Krejcik, Krystal <krejcik.krystal@epa.gov>

Sent: Thursday, March 30, 2023 4:22 PM

To: Villamizar, Nicole (she/her/hers) <Villamizar.Nicole@epa.gov>; Crossland, Andy <Crossland.Andy@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>; Suarez, Lana (she/her/hers) <Suarez.Lana@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>

Cc: OLEM ORCR IO <OLEMORCRIO@epa.gov>; Shaw, Nena <Shaw.Nena@epa.gov>

Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi all,

Please see the incoming message below regarding concerns from a stakeholder about Phosphogypsum use in roads. OLEM has requested ORCR respond on Barry's behalf so would folks please work together as appropriate to prepare a draft response to share with the ORCR IO?

As you may recall, a stakeholder reached out to Carlton inquiring about Phosphogypsum last December. (See attached.) I couldn't find an official response so am thinking that maybe this fell through the cracks between coordination with OAR and the holidays but hopefully there was already something started that folks can pull from?

While there is not a hard deadline, would this be something that folks could draft by **COB April 7th**? If you need additional time just let us know as we can be flexible on this one, but we would like to be relatively timely since we didn't get back to them the first time so keep us posted! Let me and Andrew if there are any questions or concerns. Thank you!

Best,
Krystal

Krystal Krejcik

Sr. Special Assistant
Office of Resource Conservation and Recovery
Office of Land and Emergency Management
U.S. Environmental Protection Agency
Cell: (703) 719-1176

From: Hilosky, Nick (he/him/his) <Hilosky.Nick@epa.gov>

Sent: Thursday, March 30, 2023 2:57 PM

To: Krejcik, Krystal <krejcik.krystal@epa.gov>; Mack, Andrew <mack.andrew@epa.gov>

Cc: Brooks, Becky <Brooks.Becky@epa.gov>

Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

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Sent: Thursday, March 30, 2023 1:17 PM

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208-220-2851

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From: [Veal, Lee](#)
To: [Peake, Tom](#); [Schultheisz, Daniel](#); [Egidi, Philip](#)
Cc: [Walsh, Jonathan](#); [White, Rick](#)
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?
Date: Tuesday, April 11, 2023 4:19:00 PM

Rounding out the distro

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Crossland, Andy <Crossland.Andy@epa.gov>
Sent: Tuesday, April 11, 2023 4:06 PM
To: Veal, Lee <Veal.Lee@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Atagi, Tracy <Atagi.Tracy@epa.gov>; Young, Jessica <Young.Jessica@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

Lee and Jonathan,

Hello! We wanted to give you a heads up that our acting AA Barry Breen has asked us to respond to a concerned citizen who is asking about use of coal combustion residues and phosphogypsum in road construction. (see email chain below) We've drafted a response that includes some discussion of Subpart R as well as the RCRA program, keeping it focused on the publicly available information on the EPA website.

We've been asked to provide a response by Friday 04/14 (extended from 04/07), so please let us know if you have any concerns about the response by Thursday 04/13 if possible.

Also, Lee, let me know when you are back and we should set up a time to talk about ORCR thoughts on your rulemaking effort.

Many thanks,
Andy

DRAFT RESPONSE TO BE SENT BY CAROLYN HOSKINSON

Thank you for your recent email to Barry Breen on the use of phosphogypsum and coal combustion residues in road construction. He has asked that my office respond on his behalf.

(b) (5)

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(b) (5)

Again, thank you for your interest in this important environmental issue.

Andy Crossland (he/him/his)
Director, Materials Recovery and Waste Management Division
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(202) 853-4459
Crossland.andy@epa.gov

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Sent: Thursday, March 30, 2023 2:57 PM

To: Krejcek, Krystal <krejcek.krystal@epa.gov>; Mack, Andrew <mack.andrew@epa.gov>

Cc: Brooks, Becky <Brooks.Becky@epa.gov>

Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

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From: [Veal, Lee](#)
To: [Walsh, Jonathan](#); [White, Rick](#); [Peake, Tom](#); [Schultheisz, Daniel](#)
Cc: [Rustick, Joseph](#)
Subject: RE: Transmittal of ORCR Comments on Mosaic Pilot Project Petition
Date: Wednesday, March 22, 2023 2:42:00 PM
Attachments: [image001.png](#)

Hi Jon,

It may be wise to let them know that I'll be on travel next week, just in case.

This is my first time seeing their concerns, and we can talk more in April.



Lee

Lee Ann B. Veal

(she/her)
Director, Radiation Protection Division
Office of Radiation & Indoor Air, USEPA
202-343-9448 / 202-617-4322
www.epa.gov/radiation

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Wednesday, March 22, 2023 2:32 PM
To: Veal, Lee <Veal.Lee@epa.gov>; White, Rick <White.Rick@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Cc: Rustick, Joseph <rustick.joseph@epa.gov>
Subject: FW: Transmittal of ORCR Comments on Mosaic Pilot Project Petition

FYI. I tried to keep my answer neutral. I will start to work my way through the issues raised by ORCR.

Jon

From: Walsh, Jonathan
Sent: Wednesday, March 22, 2023 2:23 PM
To: Mills, Jason Mills.Jason@epa.gov
Cc: Crossland, Andy Crossland.Andy@epa.gov; DeRobertis, Cecilia DeRobertis.Cecilia@epa.gov
Subject: RE: Transmittal of ORCR Comments on Mosaic Pilot Project Petition

I think that this is a very worthwhile conversation to have. Lee Veal is RPD's division director.

-Jon

From: Mills, Jason <Mills.Jason@epa.gov>

Sent: Wednesday, March 22, 2023 2:14 PM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Cc: Crossland, Andy <Crossland.Andy@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>

Subject: Transmittal of ORCR Comments on Mosaic Pilot Project Petition

Jonathan,

Since the last workgroup meeting, we have been working to brief our management on the issues surrounding the current petition under review by Office of Air. Attached is a summary of our most pressing concerns, many of which have previously been raised through workgroup calls and emails. Our management shares these concerns and wants to ensure that a resolution can be found before any final determination is released regarding the completeness of the petition. To that end, our Division Director will be reaching out to their counterpart within ORIA in the near future to set up a meeting. Please let us know if you have any questions in the meantime.

Jason Mills, P.E.
Environmental Engineer
Economic and Risk Analysis Staff
Office of Resource Conservation and Recovery
United States Environmental Protection Agency



From: [Walsh, Jonathan](#)
To: [Veal, Lee](#); [White, Rick](#); [Peake, Tom](#); [Schultheisz, Daniel](#)
Cc: [Rustick, Joseph](#)
Subject: FW: Transmittal of ORCR Comments on Mosaic Pilot Project Petition
Date: Wednesday, March 22, 2023 2:32:13 PM
Attachments: [image001.png](#)
[PG Issue Summary.docx](#)

ATTACHMENT-FOIA 5 INTERNALLY DELIBERATIVE

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Economic and Risk Analysis Staff
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From: [Crossland, Andy](#)
To: [Veal, Lee](#); [Walsh, Jonathan](#)
Cc: [Atagi, Tracy](#); [Young, Jessica](#); [DeRobertis, Cecilia](#)
Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?
Date: Thursday, April 13, 2023 11:29:58 AM

Thanks for following up - too many balls in the air.

We are going to propose your language for review up our chain and will definitely let you know if folks want to make edits.

--Andy

Andy Crossland (he/him/his)
Director, Materials Recovery and Waste Management Division
Office of Resource Conservation and Recovery
Office of Land and Emergency Management
(202) 853-4459
Crossland.andy@epa.gov

From: Veal, Lee <Veal.Lee@epa.gov>
Sent: Thursday, April 13, 2023 11:27 AM
To: Crossland, Andy <Crossland.Andy@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Atagi, Tracy <Atagi.Tracy@epa.gov>; Young, Jessica <Young.Jessica@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>
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Hi Andy,

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(she/her)
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202-343-9448 / 202-617-4322
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any use that does not have prior approval. On June 30, 2021, the EPA withdrew a previously granted conditional approval to use phosphogypsum in government road construction projects. The withdrawal decision was effective immediately, and so the use of phosphogypsum in road construction remains prohibited at this time, even if Florida or any other state approves that use. For more information, please see EPA's Subpart R webpage found [here](#).

Again, thank you for your interest in this important environmental issue.

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--

Shannon

I acknowledge that I am living within the boundaries of the original Fort Hall Reservation on the traditional lands of the Shoshone and Bannock peoples.

From: [Veal, Lee](#)
To: [Walsh, Jonathan](#); [Crossland, Andy](#)
Cc: [Atagi, Tracy](#); [Young, Jessica](#); [DeRobertis, Cecilia](#); [Peake, Tom](#); [Schultheisz, Daniel](#); [Rustick, Joseph](#); [Egidi, Philip](#)
Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?
Date: Tuesday, April 11, 2023 5:22:00 PM

Hi Jon and Andy,

(b) (5)

From:

(b) (5)

To:

(b) (5)

Lee

Lee Ann B. Veal
(she/her)
Director, Radiation Protection Division

Office of Radiation & Indoor Air, USEPA

202-343-9448 / 202-617-4322

www.epa.gov/radiation

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Sent: Tuesday, April 11, 2023 4:30 PM

To: Crossland, Andy <Crossland.Andy@epa.gov>; Veal, Lee <Veal.Lee@epa.gov>

Cc: Atagi, Tracy <Atagi.Tracy@epa.gov>; Young, Jessica <Young.Jessica@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>; Egidi, Philip <Egidi.Philip@epa.gov>

Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?

(b) (5) We have also received inquiries about the proposed Florida legislation; below is some language we developed for responding to those inquiries. You are welcome to borrow any of it that you feel is appropriate for this response.

Thank you for reaching out. The EPA is responsible for the regulation of phosphogypsum under the Clean Air Act, which includes reviewing alternative uses of phosphogypsum, such as in construction projects as you noted. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR Part 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seeking input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis. EPA is not planning any programmatic or regulatory updates related to the Subpart R NESHAP at this time, but we do our best to maintain current information related to phosphogypsum.

Thanks,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: [Krejcik, Krystal](#)
To: [Atagi, Tracy](#); [OLEM ORCR IO](#)
Cc: [DeRobertis, Cecilia](#); [Villamizar, Nicole \(she/her/hers\)](#); [Mills, Jason](#); [Birchfield, Norman](#); [Huggins, Richard](#); [Chow, Rita](#); [Russell, Bethany](#); [Suarez, Lana \(she/her/hers\)](#); [Young, Jessica](#); [Veal, Lee](#); [Walsh, Jonathan](#); [Crossland, Andy](#)
Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?
Date: Thursday, April 20, 2023 12:28:54 PM
Attachments: [RE Phosphogypsum \(and coal fly ash\) on roads. How can this be.msg](#)

Hello everyone,

Thank you for all your collaboration on preparing this response. It sounds like it was truly a team effort! I wanted to pass along that there were not any edits or questions from the ORCR IO so Jody sent the response back earlier today. It is attached so you have for your records. We will let you know if there is any additional follow up or questions. Thanks again!

Best,
Krystal

Krystal Krejcik

Sr. Special Assistant
Office of Resource Conservation and Recovery
Office of Land and Emergency Management
U.S. Environmental Protection Agency
Cell: (703) 719-1176

From: Atagi, Tracy <Atagi.Tracy@epa.gov>
Sent: Thursday, April 13, 2023 3:31 PM
To: OLEM ORCR IO <OLEMORCRIO@epa.gov>
Cc: DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>; Villamizar, Nicole (she/her/hers) <Villamizar.Nicole@epa.gov>; Mills, Jason <Mills.Jason@epa.gov>; Birchfield, Norman <Birchfield.Norman@epa.gov>; Huggins, Richard <Huggins.Richard@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>; Russell, Bethany <Russell.Bethany@epa.gov>; Suarez, Lana (she/her/hers) <Suarez.Lana@epa.gov>; Young, Jessica <Young.Jessica@epa.gov>; Veal, Lee <Veal.Lee@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Crossland, Andy <Crossland.Andy@epa.gov>
Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi Carolyn –

Andy asked me to send you the draft response to Shannon Ansley, the concerned citizen who emailed Barry about the use of coal combustion residues and phosphogypsum in road construction. She is particularly concerned about Florida's legislative activity to allow phosphogypsum use in roadways. In our response, we tried to make it clear that in general, states are the primary authority for solid waste beneficial use determinations, but for phosphogypsum, EPA approval is also needed under Subpart R of the Clean Air Act.

This draft response was truly a team effort, with MRWMD, RCSD, and ERAS all contributing. In addition, our colleagues in OAR provided language for the Subpart R program discussion.

Please let us know if you'd like to discuss further.

DRAFT RESPONSE

Thank you for your recent email to Barry Breen on the use of phosphogypsum and coal combustion residues in road construction. He has asked that my office respond on his behalf.

Under RCRA Subtitle D, states have the primary authority to implement and enforce standards for management of solid wastes, including whether or not to allow a proposed beneficial use. EPA developed the "[Methodology for Evaluating the Beneficial Use of Industrial Non-Hazardous Secondary Materials](#)" to aid states and others in making these decisions. As part of that document, EPA defined beneficial use as the substitution of a non-hazardous industrial material, either as generated or following additional processing, for some or all of the virgin, raw materials in a natural or commercial product in a way that provides a functional benefit, meets relevant product specifications, and does not pose concerns to human health or the environment. (Note that the "non-hazardous" designation is based on a material's regulatory status. Non-hazardous materials may still pose risk). Uses that do not meet these criteria may be considered improper disposal of a solid waste and federal action could be taken if there were a finding of imminent or substantial endangerment, even in cases where the state has determined the material to not be subject to state regulation.

EPA has previously evaluated multiple uses of coal ash using the methodology above, including use of fly ash in concrete and use of flue gas desulfurization gypsum in wallboard and as an agricultural amendment. Further information about these and other potential uses of coal ash can be found [here](#).

Phosphogypsum is unique among solid wastes in that it is separately regulated under Subpart R of the Clean Air Act. These regulations require that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA's responsibility for regulation of phosphogypsum under the Clean Air Act includes reviewing alternative uses of phosphogypsum, such as in construction projects. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR Part 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seek input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis.

Again, thank you for your interest in this important environmental issue.

From: Krejcik, Krystal <krejcik.krystal@epa.gov>

Sent: Thursday, March 30, 2023 4:22 PM

To: Villamizar, Nicole (she/her/hers) <Villamizar.Nicole@epa.gov>; Crossland, Andy <Crossland.Andy@epa.gov>; DeRobertis, Cecilia <DeRobertis.Cecilia@epa.gov>; Suarez, Lana (she/her/hers) <Suarez.Lana@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>

Cc: OLEM ORCR IO <OLEMORCRIO@epa.gov>; Shaw, Nena <Shaw.Nena@epa.gov>

Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi all,

Please see the incoming message below regarding concerns from a stakeholder about Phosphogypsum use in roads. OLEM has requested ORCR respond on Barry's behalf so would folks please work together as appropriate to prepare a draft response to share with the ORCR IO?

As you may recall, a stakeholder reached out to Carlton inquiring about Phosphogypsum last December. (See attached.) I couldn't find an official response so am thinking that maybe this fell through the cracks between coordination with OAR and the holidays but hopefully there was already something started that folks can pull from?

While there is not a hard deadline, would this be something that folks could draft by **COB April 7th**? If you need additional time just let us know as we can be flexible on this one, but we would like to be relatively timely since we didn't get back to them the first time so keep us posted! Let me and Andrew if there are any questions or concerns. Thank you!

Best,
Krystal

Krystal Krejcik

Sr. Special Assistant
Office of Resource Conservation and Recovery
Office of Land and Emergency Management
U.S. Environmental Protection Agency
Cell: (703) 719-1176

From: Hilosky, Nick (he/him/his) <Hilosky.Nick@epa.gov>

Sent: Thursday, March 30, 2023 2:57 PM

To: Krejcik, Krystal <krejcik.krystal@epa.gov>; Mack, Andrew <mack.andrew@epa.gov>

Cc: Brooks, Becky <Brooks.Becky@epa.gov>

Subject: FW: Phosphogypsum (and coal fly ash) on roads. How can this be?

Hi Krystal and Andrew,

This came in to Barry...is this something someone in ORCR can respond to? I am not sure about her

reference to Carlton – or if anyone has responded previously, but this is the first time that I have seen an incoming from this particular person.

Nick

Nicholas J. Hilosky
Acting Chief of Staff
Office of Land and Emergency Management
US Environmental Protection Agency
ph: 202-566-1942; mobile: 202-368-0724

From: Shannon Ansley <anslshan59@gmail.com>
Sent: Thursday, March 30, 2023 1:17 PM
To: Breen, Barry <Breen.Barry@epa.gov>
Subject: Phosphogypsum (and coal fly ash) on roads. How can this be?

Good morning, Mr. Breen.

As you know, using phosphogypsum in road construction has been banned by EPA because of its toxicity, radioactivity, and leachability. However, in Florida the current legislature is voting to approve use of phosphogypsum and coal-produced fly ash in construction of roads in Florida. Is there a way to stop this? If it passes in Florida, other states will likely follow, especially Idaho. Can the EPA please do something?

I just learned that Dr. Waterhouse is no longer with EPA and had been keeping him informed on issues with phosphogypsum and fertilizer production around the country.

Best regards,
Shannon Ansley
Pocatello, Idaho
208-220-2851

--

Shannon

I acknowledge that I am living within the boundaries of the original Fort Hall Reservation on the traditional lands of the Shoshone and Bannock peoples.

Veal, Lee

From: Barringer, Jody
Sent: Thursday, April 20, 2023 10:46 AM
To: Shannon Ansley
Cc: Breen, Barry; Hoskinson, Carolyn; Krejcik, Krystal; Mack, Andrew; Brooks, Becky
Subject: RE: Phosphogypsum (and coal fly ash) on roads. How can this be?

Good morning, Ms. Ansley,

Thank you for your recent email to Barry Breen on the use of phosphogypsum and coal combustion residues in road construction. He has asked that my office, which focuses on these issues, respond on his behalf.

Under RCRA Subtitle D, states have the primary authority to implement and enforce standards for management of solid wastes, including whether or not to allow a proposed beneficial use. EPA developed the "[Methodology for Evaluating the Beneficial Use of Industrial Non-Hazardous Secondary Materials](#)" to aid states and others in making these decisions. As part of that document, EPA defined beneficial use as the substitution of a non-hazardous industrial material, either as generated or following additional processing, for some or all of the virgin, raw materials in a natural or commercial product in a way that provides a functional benefit, meets relevant product specifications, and does not pose concerns to human health or the environment. (Note that the "non-hazardous" designation is based on a material's regulatory status. Non-hazardous materials may still pose risk). Uses that do not meet these criteria may be considered improper disposal of a solid waste and federal action could be taken if there were a finding of imminent or substantial endangerment, even in cases where the state has determined the material to not be subject to state regulation.

EPA has previously evaluated multiple uses of coal ash using the methodology above, including use of fly ash in concrete and use of flue gas desulfurization gypsum in wallboard and as an agricultural amendment. Further information about these and other potential uses of coal ash can be found [here](#).

Phosphogypsum is unique among solid wastes in that it is separately regulated under Subpart R of the Clean Air Act. These regulations require that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA's responsibility for regulation of phosphogypsum under the Clean Air Act includes reviewing alternative uses of phosphogypsum, such as in construction projects. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition under 40 CFR Part 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seek input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis.

Again, thank you for your interest in this important environmental issue.

Take care,
Jody

Jody Barringer, Deputy Office Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency

o: (202) 566-1273 | c: (202) 961-8423

barringer.jody@epa.gov

From: Shannon Ansley <anslshan59@gmail.com>

Sent: Friday, March 31, 2023 3:31 PM

To: Krejcik, Krystal <krejcik.krystal@epa.gov>

Cc: Mack, Andrew <mack.andrew@epa.gov>

Subject: Re: Phosphogypsum (and coal fly ash) on roads. How can this be?

Thank you so much for your response.

Best regards,
Shannon Ansley
208-220-2851

On Fri, Mar 31, 2023 at 12:20 PM Krejcik, Krystal <krejcik.krystal@epa.gov> wrote:

Dear Ms. Ansley,

Your email below to Acting Assistant Administrator Barry Breen was shared with me so I am responding on his behalf to let you know that your email has been received and our technical experts are looking into this topic further. We will share a more detailed response with you in the next couple of weeks. Thank you for reaching out!

Best,

Krystal

Krystal Krejcik

Sr. Special Assistant

Office of Resource Conservation and Recovery

Office of Land and Emergency Management

U.S. Environmental Protection Agency

Cell: (703) 719-1176

From: Shannon Ansley <anslshan59@gmail.com>

Sent: Thursday, March 30, 2023 1:17 PM

To: Breen, Barry <Breen.Barry@epa.gov>

Subject: Phosphogypsum (and coal fly ash) on roads. How can this be?

Good morning, Mr. Breen.

As you know, using phosphogypsum in road construction has been banned by EPA because of its toxicity, radioactivity, and leachability. However, in Florida the current legislature is voting to approve use of phosphogypsum and coal-produced fly ash in construction of roads in Florida. Is there a way to stop this? If it passes in Florida, other states will likely follow, especially Idaho. Can the EPA please do something?

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Best regards,

Shannon Ansley

Pocatello, Idaho

208-220-2851

--

Shannon

I acknowledge that I am living within the boundaries of the original Fort Hall Reservation on the traditional lands of the Shoshone and Bannock peoples.

--

Shannon

I acknowledge that I am living within the boundaries of the original Fort Hall Reservation on the traditional lands of the Shoshone and Bannock peoples.

From: "Young, India"

To: "Rustick, Joseph" <rustick.joseph@epa.gov>
 "Bacon, Stefanie" <Bacon.stefanie@epa.gov>
 "Montecalvo, Danielle\" (she/her/hers\)" <Montecalvo.Danielle@epa.gov>

Date: 1/23/2023 9:14:33 AM

Subject: FW: Shoshone-Bannock Tribes Fluoride Monitoring Discussion

-----Original Appointment-----

From: Young, India <young.india@epa.gov>

Sent: Friday, January 20, 2023 5:03 PM

To: Young, India; kwright@sbtribes.com; lhowell@sbtribes.com; Susan Hanson; Allen, Tia; McAuley, Jim; Jager, Doug; Shappley, Ned; Rice, Joann; Gullett, Brian; Walsh, Jonathan

Cc: Brozusky, Sandra

Subject: Shoshone-Bannock Tribes Fluoride Monitoring Discussion

When: Friday, January 27, 2023 11:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: Microsoft Teams Meeting

Hello Jon,

Jim McAuley asked me to invite you to this call help address the question below from the Shoshone Bannock Tribes:

Which radium pollutants are being emitted into the air from windblown dust from the Simplot phosphogypsum stacks?

I am also forwarding you a planning call to give some background for Monday.

Thank you,
 India

-----Original Appointment-----

From: Young, India

Sent: Friday, January 6, 2023 12:58 PM

To: Young, India; kwright@sbtribes.com ; lhowell@sbtribes.com ; Susan Hanson; Allen, Tia; McAuley, Jim; Jager, Doug; Shappley, Ned; Rice, Joann; Gullett, Brian; Walsh, Jonathan

Cc: Brozusky, Sandra

Subject: Shoshone-Bannock Tribes Fluoride Monitoring Discussion

When: Friday, January 27, 2023 11:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).

Where: Microsoft Teams Meeting

Hello,

I updated the day and time so everyone can attend. Please let me know if this new day and time work.

The purpose of this call is to discuss the types of fluoride air monitoring that are available and appropriate for the Shoshone-Bannock Tribes to implement on the Fort hall Reservation. During our last call (1/6/2023), we asked about the preferred monitoring options HF, fluoride, or fluoride ions, but more information is needed to determine which of these would be best. It would be helpful to discuss, in more detail, the differences in these measurement methodologies, their benefits, and drawbacks during this call.

Thank you.

Microsoft Teams meeting

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5/15/2023

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From: "Nesky, Anthony"

To: "Laver, Shelley" <Laver.Shelley@epa.gov>

Date: 3/29/2023 3:41:48 PM

Subject: Media Inquiry from Fresh Take Florida - Phosphogypsum--CWMR-approved response ready for management review

Dear Shelley:

Here's the CWMR-approved response to the press inquiry about phosphogypsum. Upon your approval, could you please forward to Lee (or Rick) for approval. It is due to the press office Friday morning, but I'd like to get it to them before COB if possible

Tony

Question: My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

CWMR-Approved Response

Thank you for reaching out. The EPA is responsible for the regulation of phosphogypsum under the Clean Air Act, which includes reviewing alternative uses of phosphogypsum, such as in construction projects as you noted. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR Part 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seeking input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis. EPA is not planning any programmatic or regulatory updates related to the Subpart R NESHAP at this time, but we do our best to maintain current information related to phosphogypsum.

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>

Sent: Wednesday, March 29, 2023 4:33 PM

To: Nesky, Anthony <Nesky.Tony@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Lavery, Ted <lavery.ted@epa.gov>

Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--Draft reply to send to mgmt review based on your input

Looks fine to me. Thanks.

From: Nesky, Anthony <Nesky.Tony@epa.gov>

Sent: Wednesday, March 29, 2023 4:32 PM

To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Lavery, Ted <lavery.ted@epa.gov>

Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--Draft reply to send to mgmt review based on your input

Importance: High

Dear Dan and Jon:

Thank you both for your edits and linguistic precision! I replaced the highlighted sentence with Jon's language. Please review the response below, and make any changes you need. I'll then send your approved message up the chain for approval.

Tony

Question: My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

5/15/2023

Draft Response for RPD Management Approval

Thank you for reaching out. The EPA is responsible for the regulation of phosphogypsum under the Clean Air Act, which includes reviewing alternative uses of phosphogypsum, such as in construction projects as you noted. Under the Clean Air Act, review and possible approval of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR Part 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seeking input on the proposed decision. It is our understanding that the proposed legislation under consideration in Florida would not affect the requirement, under 40 CFR Part 61, that U.S. EPA review proposed alternative uses of phosphogypsum on an individual, case-by-case basis. EPA is not planning any programmatic or regulatory updates related to the Subpart R NESHAP at this time, but we do our best to maintain current information related to phosphogypsum.

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Sent: Wednesday, March 29, 2023 1:09 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>
Cc: Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--Suggested edits to Draft Response

I think this is fine. (b) (5)

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Wednesday, March 29, 2023 1:06 PM
To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>
Cc: Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--Suggested edits to Draft Response

(b) (5)

Jon

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Sent: Wednesday, March 29, 2023 12:59 PM
To: Nesky, Anthony <Nesky.Tony@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>
Cc: Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--Suggested edits to Draft Response

(b) (5)

I think this is a reasonable response.

From: Nesky, Anthony <Nesky.Tony@epa.gov>
Sent: Wednesday, March 29, 2023 12:31 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>
Cc: Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum--Suggested edits to Draft Response
Importance: High

This is a great response, thanks! Please see my suggested edits: (b) (5)
 5/15/2023

(b) (5)

Please evaluate and make edits as you see fit.

Question: My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

Suggested edits to draft response

(b) (5)

Tony

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Wednesday, March 29, 2023 10:14 AM
To: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Nesky, Anthony <Nesky.Tony@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>
Cc: Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum

I'm willing to speak to this person, which is what she has requested, but I guess that's against Agency policy.

Here is the language I developed for Lee to respond to an NGO on the topic of this legislation. It can be adapted for press inquiries: *Thank you for reaching out. The Radiation Protection Division is responsible for the regulation of phosphogypsum under the Clean Air Act, which includes reviewing alternative uses of phosphogypsum, such as in construction projects as you noted. We have only recently become aware of the proposed legislation in Florida, after receiving some press inquiries on the topic of phosphogypsum use. I am not familiar with the specific article that you quoted. Although we do our best to maintain current information related to phosphogypsum, we are not planning any programmatic or regulatory updates related to the Subpart R NESHAP at this time. Any such action would be only be performed with public notice and opportunities for comment. Our review of any proposed projects will be performed on a case-by-case basis, using our guidance "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR 61.206, A Workbook" (Dec. 2005). https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf. As described in Section 2.4, upon issuing any notice of pending approval, EPA would open a public comment period, make any applications and our technical analysis of those applications publicly available, and seeking input on the proposed decision.*

- Jon

From: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Sent: Wednesday, March 29, 2023 8:05 AM
To: Nesky, Anthony <Nesky.Tony@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum

Tony, I think this is a good idea. Especially because we wouldn't want anyone to be surprised by a news article that gets published.

From: Nesky, Anthony <Nesky.Tony@epa.gov>
Sent: Tuesday, March 28, 2023 5:26 PM
To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Laver, Shelley <Laver.Shelley@epa.gov>
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum

It just occurred to me: given this is Florida, should Region 4 be looped in?

5/15/2023

Tony

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov> >
Sent: Tuesday, March 28, 2023 8:34 AM
To: Nesky, Anthony <Nesky.Tony@epa.gov> >; Peake, Tom <Peake.Tom@epa.gov> >; Walsh, Jonathan <Walsh.Jonathan@epa.gov> >
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov> >; Laver, Shelley <Laver.Shelley@epa.gov> >
Subject: RE: Media Inquiry from Fresh Take Florida - Phosphogypsum

We probably can. The Florida legislation explicitly states that only projects approved by EPA can be pursued. That legislation by itself will not prompt us to do studies or review subpart R, but if it results in more requests, we would be more likely to review the technical basis for the rules and approval process. The international work may also be of interest to this journalist.

Jon, can you work something up? Thanks.

From: Nesky, Anthony <Nesky.Tony@epa.gov> >
Sent: Monday, March 27, 2023 5:40 PM
To: Peake, Tom <Peake.Tom@epa.gov> >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov> >; Walsh, Jonathan <Walsh.Jonathan@epa.gov> >
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov> >; Laver, Shelley <Laver.Shelley@epa.gov> >
Subject: FW: Media Inquiry from Fresh Take Florida - Phosphogypsum
Importance: High

Please see the press inquiry below about phosphogypsum.

Good afternoon,

My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

I have been directed to complete this story by the end of this week.

Thank you for your consideration, and I look forward to hearing from you.

Best,
Lucille Lannigan

Lucille Lannigan

Fresh Take Florida | WUFT News

(305) 780-9842 | [llannigan@freshtakeflorida](mailto:llannigan@freshtakeflorida.com) .com

I suggest that we reply in writing if we have information that could help her. Do we have any studies that might be helpful? Would we want to point to the ones on website at:
<https://www.epa.gov/radiation/request-use-phosphogypsum-government-road-projects-supporting-documents>

If the Florida legislation has no effect on the approval process under Subpart R, we should say so explicitly.

Would it be possible to reply to the press office by COB Wednesday? Are there other parts of the Agency that should contribute to the response?

I wonder if some previous replies to inquiries might be helpful or relevant. They are below .

Tony

Politico, 3-1-23

Questions from Politico: What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects Has there been a determination since then that the material is a threat to water and human health?

RPD Approved Answer-Clear Highlighted sentence with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). **EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.** (Note on highlight: we may need input from RCRA on this statement.)

10-15-20

Center for Biological Diversity just sent this. Can you comment on this?

The last time it was evaluated for use in roads, the EPA found that the gypsum in FL was too radioactive for that use. (<http://www.fipr.state.fl.us/about-us/phosphate-primer/phosphogypsum-and-the-epa-ban/>). Without seeing the EPA's analysis (assuming there is one), I can't imagine what has changed, except the agency's tolerance for which and how many people get sick or die as a result of exposure.

APPROVED RPD ANSWER

In 1992, EPA analyzed the use of phosphogypsum in road construction and determined that the risks to road construction workers and members of the public using the road and living near the road were likely acceptable. However, as noted by the referenced web site, the potential risks to a future resident, referred to as a reclaimer, living in a home built on the site of an abandoned road were unacceptably high. For this reason, EPA did not provide a categorical approval for use in roads, as it did for the use of phosphogypsum in agriculture in 40 CFR 61.204 and research and development in 40 CFR 61.205. The 1992 rule provided a process to request approval of other uses of phosphogypsum, including road construction, and that process is described in 40 CFR 61.206. After considering the request by The Fertilizer Institute, the Agency believes its concerns regarding future use of the road site can be addressed by appropriate terms and conditions. This approval allows for the use of phosphogypsum in road construction, but not for unrestricted use of a road site in the future. As conditions of this approval, records are required to be generated and maintained which would inform the consideration of the risks to the public, should the road become disused and the site proposed for use for any purpose other than a road.

The Docket with the supporting documents will become active once the Federal Register Notice is published (www.regulations.gov , search on Docket No. EPA-HQ-OAR-2020-0442). We are making the approval letter and some other supporting documents available on our website until the Docket opens. You can see them at:

<https://www.epa.gov/radiation/approval-other-uses-phosphogypsum-supporting-documents>

Other press responses about phosphogypsum are at:

(b) (5)

From: Lucille Lannigan <llannigan@freshtakeflorida.com>
Sent: Monday, March 27, 2023 1:44 PM
To: Powell, Shayla <Powell.Shayla@epa.gov>; EPA Press Office <Press@epa.gov>
Subject: Media Inquiry from Fresh Take Florida

Good afternoon,

My name is Lucille Lannigan, and I'm a writer for Fresh Take Florida. I'm reaching out about two pieces of Florida legislation on the use of phosphogypsum. I'm working on an explainer piece for these two bills and would like to speak to someone at the EPA about any studies that have been done, are currently being done and will be done if this legislation is passed. I'm trying to gain a better understanding of what is being studied, what risks are for using this material and what any benefits might be — especially after the EPA repealed its authorization on the use of phosphogypsum in roads.

I have been directed to complete this story by the end of this week.

Thank you for your consideration, and I look forward to hearing from you.

5/15/2023

Best,
Lucille Lannigan

Lucille Lannigan

Fresh Take Florida | WUFT News

(305) 780-9842 | [llannigan@freshtakeflorida](mailto:llannigan@freshtakeflorida.com) .com

From: "McAuley, Jim"
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 1/6/2023 3:22:20 PM
Subject: Phosphogypsum

Hi Jon,

I hope '23 has had a good start and a continues that way for you and yours.

We have a tribe in R10 - Shoshone-Bannock, located in Eastern Idaho. There is a company there (Simplot) that has an active phosphogypsum stack. One of the issues that the Shoshone-Bannock tribe has is they have observed in high winds this stack appears to have a lot of dust coming from it. That area has considerable amount of high winds throughout the year. The concern of course is they do not believe their waste management of the stack is adequate and the dust may contain the respective radionuclides from the Phosphogypsum. There is also a concerned that the water used on the stack maybe misused and release radionuclides and other hazards to the atmosphere. So far, I have had a good relationship with Simplot and hope that I can do some oversight that will help the tribe feel there is not an issue, or identify issues that need to be resolve.

I do know how busy you are, but if you can give me a few minutes of your time to run by what options I might have that are appropriate for me to do I'd greatly appreciate it. I sent a invite for 30min. for Monday afternoon, but if that doesn't work anytime you have available would be very appreciated.

Thanks,
-Jim



Jim McAuley
Health Physicist
Air and Radiation Division
USEPA REGION 10
1200 Sixth Avenue
Mail Code Suite 155, 15-K15
Seattle, WA 98101

Office: (206) 553-1987
Cell: (360) 840-6938

From: "Powell, Shayla"
 To: "Stevens, Katherine" <stevens.katherine@epa.gov>
 "Bacon, Stefanie (she/her/hers)" <Bacon.stefanie@epa.gov>
 "Lee, Raymond" <Lee.Raymond@epa.gov>
 "Millett, John" <Millett.John@epa.gov>
 "DeLuca, Isabel" <DeLuca.Isabel@epa.gov>
 "Beck, Laura (she/her/hers)" <Beck.Laura@epa.gov>
 Date: 3/2/2023 12:58:48 PM
 Subject: RE: Follow-up: Politico - phosphogypsum

Received. Thanks all!

Respectfully,

Shayla R. Powell
 Office of Public Affairs/Office of the Administrator
 (Mobile) 202-573-5349

From: Stevens, Katherine <stevens.katherine@epa.gov>
Sent: Thursday, March 2, 2023 1:30 PM
To: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>
Subject: RE: Follow-up: Politico - phosphogypsum

This works for me. Thanks!

From: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov >
Sent: Thursday, March 2, 2023 1:25 PM
To: Powell, Shayla <Powell.Shayla@epa.gov >; Stevens, Katherine <stevens.katherine@epa.gov >; Lee, Raymond <Lee.Raymond@epa.gov >; Millett, John <Millett.John@epa.gov >; Deluca, Isabel <DeLuca.Isabel@epa.gov >; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov >
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Peake, Tom <Peake.Tom@epa.gov >; Walsh, Jonathan <Walsh.Jonathan@epa.gov >; Rustick, Joseph <rustick.joseph@epa.gov >
Subject: RE: Follow-up: Politico - phosphogypsum

Good afternoon,

Below is a response to the Politico follow-up that our management is comfortable sending forward. Please note that we do not wish to name the requestor referenced in the response.

EPA has received a request to approve use of phosphogypsum and is working with the requestor to resolve questions before beginning its technical review. As described in EPA's 2005 workbook, the Agency will provide an opportunity for public review and comment if it proposes to approve the request. See https://www.epa.gov/sites/default/files/2015-05/documents/wrkbk_sub-r_appl_1105.pdf.

From: Powell, Shayla <Powell.Shayla@epa.gov >
Sent: Thursday, March 2, 2023 10:33 AM
To: Stevens, Katherine <stevens.katherine@epa.gov >; Lee, Raymond <Lee.Raymond@epa.gov >; Millett, John <Millett.John@epa.gov >; Deluca, Isabel <DeLuca.Isabel@epa.gov >; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov >
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov >
Subject: Follow-up: Politico - phosphogypsum

Hi Kati, Team,

Please see the follow-up question below. Thanks!

5/15/2023

Has the EPA received a petition to use phosphogypsum since The Fertilizer Institute request was denied?

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Stevens, Katherine <stevens.katherine@epa.gov>
Sent: Wednesday, March 1, 2023 2:28 PM
To: Powell, Shayla <Powell.Shayla@epa.gov>; Lee, Raymond <Lee.Raymond@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Subject: RE: Politico 4 PM DDL- phosphogypsum

The RPD-part of the answer to Politico is below. Please note that OLEM and OCSPP were petitioned to take action on phosphogypsum under RCRA and TSCA, respectively. Therefore, they will need to clear the last, highlighted sentence in the response.

Questions from Politico: What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects Has there been a determination since then that the material is a threat to water and human health?

RPD Approved Answer-Clear Highlighted sentence with OLEM and OSCPP: Under the regulations at 40 CFR Part 61, Subpart R, EPA requires that phosphogypsum be managed in engineered stacks, which are designed to limit public exposure from emissions of radon and other radionuclides. EPA may approve a request for a specific use of phosphogypsum if it is determined that the proposed use is at least as protective of human health as placement in a stack.

EPA withdrew its October 2020 approval of the request by The Fertilizer Institute because the Agency determined that the request did not include all of the items required under Subpart R. The Agency stipulated that future requests containing all of the required information would be reviewed according to the process described in Subpart R and Agency guidelines (86 FR 35795, July 7, 2021). **EPA has made no further determination regarding the public health or environmental impacts associated with the use of phosphogypsum.**

From: Powell, Shayla <Powell.Shayla@epa.gov>
Sent: Wednesday, March 1, 2023 1:32 PM
To: Lee, Raymond <Lee.Raymond@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Subject: RE: Politico 4 PM DDL- phosphogypsum

Thanks! The reporter extended the deadline to 4PM today.

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Lee, Raymond <Lee.Raymond@epa.gov>
Sent: Wednesday, March 1, 2023 1:06 PM
To: Stevens, Katherine <stevens.katherine@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>; Millett, John <Millett.John@epa.gov>; Deluca, Isabel <DeLuca.Isabel@epa.gov>; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov>
Cc: Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>
Subject: RE: Politico 3 PM DDL- phosphogypsum

5/15/2023

Thanks Kati! I've forwarded to the appropriate folks in RPD. We'll be in touch.

From: Stevens, Katherine <stevens.katherine@epa.gov> >
Sent: Wednesday, March 1, 2023 1:02 PM
To: Powell, Shayla <Powell.Shayla@epa.gov> >; Millett, John <Millett.John@epa.gov> >; Deluca, Isabel <DeLuca.Isabel@epa.gov> >; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov> >
Cc: Lee, Raymond <Lee.Raymond@epa.gov> >; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov> >
Subject: RE: Politico 3 PM DDL- phosphogypsum

Looping in RPD.

From: Powell, Shayla <Powell.Shayla@epa.gov> >
Sent: Wednesday, March 1, 2023 12:59 PM
To: Millett, John <Millett.John@epa.gov> >; Deluca, Isabel <DeLuca.Isabel@epa.gov> >; Beck, Laura (she/her/hers) <Beck.Laura@epa.gov> >; Stevens, Katherine <stevens.katherine@epa.gov> >
Subject: FW: Politico 3 PM DDL- phosphogypsum
Importance: High

Good afternoon, OAR,

Please see the below inquiry. Not sure who in ORIA to include. Cathy is following up with the reporter to see if there is any wiggle room with the deadline. Thanks!

Hello Matt, Trish and Shayla,

Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

Incoming:

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Respectfully,

Shayla R. Powell
Office of Public Affairs/Office of the Administrator
(Mobile) 202-573-5349

From: Milbourn, Cathy <Milbourn.Cathy@epa.gov> >
Sent: Wednesday, March 1, 2023 12:52 PM
To: Colip, Matthew <colip.matthew@epa.gov> >; Powell, Shayla <Powell.Shayla@epa.gov> >; Taylor, Trish <Taylor.Trish@epa.gov> >
Subject: Politico 3 PM DDL- Flagging for Matt/Trish and Shayla: phosphogypsum
Importance: High

Hello Matt, Trish and Shayla,

Trish – can you check to see if OLEM has anything on this? Because it's a tight deadline, I'm flagging OLEM and Shayla.

I understand this is an ORIA and OLEM issue. I believe the conditional use approval, later withdrawn, was under the Radiation Protection Division of ORIA.

Incoming:

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

From: Bruce Ritchie <britchie@politico.com>
Sent: Wednesday, March 1, 2023 12:08 PM
To: EPA Press Office <Press@epa.gov>
Cc: Milbourn, Cathy <Milbourn.Cathy@epa.gov>; Powell, Shayla <Powell.Shayla@epa.gov>
Subject: Phosphogypsum

Hi Cathy and Shayla and others! I'm not sure who deals with the topic of phosphogypsum in roadways.

What if anything has the EPA done on this topic since June 2021 when it withdrew conditional approval of use of phosphogypsum in government road construction projects. Has there been a determination since then that the material is a threat to water and human health?

Thanks! Can you get back to me by 3? Please acknowledge receipt of this email.

From: Bruce Ritchie britchie@politico.com
Sent: Wednesday, March 1, 2023 12:08 PM
To: EPA Press Office Press@epa.gov
Cc: Milbourn, Cathy Milbourn.Cathy@epa.gov ; Powell, Shayla Powell.Shayla@epa.gov
Subject: Phosphogypsum

Bruce Ritchie

POLITICO

Florida environment and energy reporter

850-385-1774 (land line, no texting)

850-566-4518 (cell)

britchie@politico.com

Twitter: @bruceritchie

From: "Walsh, Jonathan"

To: "Egidi, Philip" <Egidi.Philip@epa.gov>
 "Schultheisz, Daniel" <Schultheisz.Daniel@epa.gov>
 "Peake, Tom" <Peake.Tom@epa.gov>

Date: 3/3/2023 3:39:05 PM

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

This report they're developing will definitely be a comprehensive review of current "circular economy" efforts.

From: Egidi, Philip <Egidi.Philip@epa.gov>

Sent: Friday, March 3, 2023 3:35 PM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Thanx and good luck. Maybe we will learn something...
 PVE

Philip Egidi
 Physical Scientist
 U.S. Environmental Protection Agency
 Radiation Protection Division
 Hotchkiss, CO
 (202) 222-5612 (Work cell)

(b) (6)

"When the going gets weird, the weird turn pro." – Dr. Hunter S. Thompson

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov >

Sent: Friday, March 3, 2023 1:19 PM

To: Egidi, Philip <Egidi.Philip@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Peake, Tom <Peake.Tom@epa.gov >

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

I spoke to a staff member at RTI. Unless anyone objects, I will go through the process and answer questions about reducing and reusing phosphate mining waste, relying on our publicly-available references. It's a NSF study, so I can't envision any conflict. It will take about two hours total.

Jon

From: Egidi, Philip <Egidi.Philip@epa.gov >

Sent: Friday, March 3, 2023 11:23 AM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Peake, Tom <Peake.Tom@epa.gov >

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Please do; I have no problem laying low at this time and not playing.
 PVE

Philip Egidi
 Physical Scientist
 U.S. Environmental Protection Agency
 Radiation Protection Division
 Hotchkiss, CO
 (202) 222-5612 (Work cell)

(b) (6)

5/15/2023

“Thou Shalt Not Apply Radium to the Surface of the Earth”

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Sent: Friday, March 3, 2023 9:21 AM

To: Egidi, Philip <Egidi.Philip@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

I'm generally happy to serve, but everything related to PG makes me really nervous right now.

OK if I call Barbara and learn more about the project?

From: Egidi, Philip <Egidi.Philip@epa.gov>

Sent: Friday, March 3, 2023 11:17 AM

To: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Sure, no problem.

Jon, do want to participate in this one?

PVE

Philip Egidi
Environmental/Physical Scientist
U.S. Environmental Protection Agency
Radiation Protection Division
Office of Radiation and Indoor Air
Hotchkiss, CO
(202) 222-5612 (work cell)

(b) (6)



From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>

Sent: Friday, March 3, 2023 9:13 AM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>

Cc: Egidi, Philip <Egidi.Philip@epa.gov>

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

(b) (5)

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Sent: Friday, March 3, 2023 11:10 AM

To: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>

Cc: Egidi, Philip <Egidi.Philip@epa.gov>

5/15/2023

Subject: FW: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

More PG activity

From: Butler, Barbara <Butler.Barbara@epa.gov>

Sent: Friday, March 3, 2023 9:26 AM

To: Egidi, Philip <Egidi.Philip@epa.gov>; Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Subject: RE: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Awesome – thanks for your rapid response!

Enjoy your coffee, just finished mine. :)

From: Egidi, Philip <Egidi.Philip@epa.gov>

Sent: Friday, March 3, 2023 9:15 AM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Butler, Barbara <Butler.Barbara@epa.gov>

Subject: FW: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Barb,

Good timing. We are in the middle of reviewing an application for Mosaic to construct some test road beds at one of their sites in FL. Our point man for PG is Jon Walsh, and I copied him here. Will look over what you sent this morning after some coffee...
PVE

Philip Egidi

Physical Scientist

U.S. Environmental Protection Agency

Radiation Protection Division

Hotchkiss, CO

(202) 222-5612 (Work cell)

(b) (6)

“When the going gets weird, the weird turn pro.” – Dr. Hunter S. Thompson

From: Butler, Barbara <Butler.Barbara@epa.gov>

Sent: Friday, March 3, 2023 6:28 AM

To: Egidi, Philip <Egidi.Philip@epa.gov>

Cc: Barth, Edwin <Barth.Ed@epa.gov>

Subject: FW: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Good morning Phil,

Ed Barth and I received this email from Kate Bronstein at RTI (RTI is managing the meetings for the STEPS group). We worked on a project under one of our ORD contracts and she was the project manager. From the description of the group, RTI manages the meetings.

Personally, I'm not in the loop on past or potential future plans with respect to reducing or reusing phosphogypsum (highlighted in the email below as the topic for which it looks like the STEPS group wants an EPA person to help with discussions). My involvement in phosphate mining has been through treatment of selenium in leachate. You were the first person I thought of from the NMT who might be able to provide the perspective they're seeking, because of your expertise with TENORM.

I was going to send to Joy to send out to the NMT, but she has an out of office message and won't be back until the 6th and the first set of meetings is March 8-10. Would you contact Kate if you're interested in participating in the meetings or send the email along to anyone else you of know who would be interested?

Thanks!

Barb

From: Bronstein, Kate <kbronstein@rti.org>

5/15/2023

Sent: Thursday, March 2, 2023 3:17 PM

To: Butler, Barbara <Butler.Barbara@epa.gov>; Barth, Edwin <Barth.Ed@epa.gov>

Subject: Invitation to participate in the NSF Science and Technologies for Phosphorus Sustainability (STEPS) Roadmap planning

Hi Ed and Barb,

I trust you are both doing well. I'm reaching out on behalf of RTI Innovation Advisors colleague who is working with the Science and Technologies for Phosphorus Sustainability ([STEPS](#)) Center to develop a roadmap for national phosphorus sustainability. STEPS is an NSF-funded grant launched in 2021 and housed at North Carolina State University. RTI is a partner organization along with several other research universities. The attached provides a brief overview of the STEPS program and high-level agenda for the working groups.

We're looking to incorporate the expertise of diverse individuals across multiple sectors to participate in small working groups (a few people per topic, 3 virtual meetings, 30 minutes each). I'm reaching out to you because **reducing and reusing phosphate mining waste will be part of the roadmap and I thought you or perhaps another EPA colleague would provide a highly valuable perspective.** Participation requires completing some short pre-meeting homework to help guide the working group meetings in addition to joining the meetings. Ideas and feedback shared through the workgroup will be assessed by the STEPS team and may funnel into the roadmap.

The 30-minute meetings are being scheduled during March 8-10, March 15-17, and April 10-12. Any help would be much appreciated in identifying an expert for the phosphate mining waste working group as the STEPS team is lacking a stakeholder from the mining waste perspective. I'm happy to connect you with one of my colleagues to answer any questions you may have.

Thanks in advance,
Kate

Kate Bronstein
Research Environmental Engineer
RTI International (www.rti.org)
Office: 919.541.7433 | Mobile: 610.217.4604

From: "Egidi, Philip"
To: "Peake, Tom" <Peake.Tom@epa.gov>
"Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 3/6/2023 1:38:23 PM
Subject: RE: phosphogypsum - FL legislation

Wow. Have not heard any of this through any of the grapevines.
Looks like we are a small part of a larger strategy.

PVE

Philip Egidi

Physical Scientist

U.S. Environmental Protection Agency

Radiation Protection Division

Hotchkiss, CO

(202) 222-5612 (Work cell)

(b) (6)

"When the going gets weird, the weird turn pro." – Dr. Hunter S. Thompson

From: Peake, Tom <Peake.Tom@epa.gov>
Sent: Monday, March 6, 2023 11:11 AM
To: Egidi, Philip <Egidi.Philip@epa.gov>
Subject: FW: phosphogypsum - FL legislation

FYI

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov >
Sent: Friday, March 3, 2023 6:51 AM
To: Peake, Tom <Peake.Tom@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Veal, Lee <Veal.Lee@epa.gov >; White, Rick <White.Rick@epa.gov >
Subject: phosphogypsum - FL legislation

I was searching to see if anything related to the Politico story was available, and found this:

<https://biologicaldiversity.org/w/news/press-releases/florida-legislature-considers-use-of-radioactive-phosphogypsum-in-road-construction-2023-02-28/>

There does not seem to be any press activity on this yet, and I have not read the bills. I will try to do so.

-Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: "Kristine Parra" <kristine@travertinetech.com>
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 1/24/2023 10:02:13 AM
Subject: Re: Phosphogypsum research

Hi Jon,

I'm just wondering if you had any follow up guidance to the note I left below with regards to the sample quantities for 61.205. This looks like potentially the only hurdle we have from receiving materials from our international PG collaborators.

Thanks so much,
Kristine

On Tue, Jan 17, 2023 at 2:37 PM Kristine Parra <kristine@travertinetech.com> wrote:

Hi Jon,

Thanks for confirming! I had one more clarifying point about Subpart R 61.205 usage and receiving from international suppliers - with regards to analysis of Ra-226. It look like 61.205 requires certifications that follow 61.208 which includes certified Ra-226 average concentration levels. This part makes sense to us, but I wanted to confirm that the requirement for international sources to obtain this average value is 30 individually analyzed samples? We are planning to receive fairly small quantities (<20 kg) and sampling and analysis at these quantities may become prohibitively costly.

Best,
Kristine

On Thu, Jan 5, 2023 at 9:28 AM Walsh, Jonathan <Walsh.Jonathan@epa.gov> wrote:

Hi Kristine,

I agree with your interpretation that as long as the testing and record keeping requirements of Subpart H are met, then you will be in compliance with EPA regulations.

I'm not an expert on transportation, but in my limited experience, phosphogypsum falls outside of DOT's regulations due to its low levels of radioactivity.

Jon

From: Kristine Parra <kristine@travertinetech.com>
Sent: Wednesday, January 4, 2023 2:58 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Subject: Re: Phosphogypsum research

Hi Jon,

I had one follow-up question related to this indoor research inquiry. We may be receiving some of the phosphogypsum from international suppliers. With regards to certification of these received products (e.g. Ra-226 testing, etc). Are there any additional regulations to consider since it will be coming from outside the country? Or as long as 61.208 and 61.207 are adhered to by the supplier at the site and testing done in a lab in their own country for Ra-226, will it fall under EPA guidelines?

Thank you,

Kristine

On Thu, Nov 3, 2022 at 12:03 PM Kristine Parra <kristine@travertinetech.com> wrote:

Hi Jonathan,

Thanks for following up! The information you initially provided was helpful to us and I'm confident we fall under the indoor research requirements found in 40 CFR §61.205. We are currently working with our state regulators as PG and TENORM is more heavily regulated in Colorado than federally, but if we have any follow up questions I'll be sure to reach out.

Best,

Kristine

On Tue, Oct 18, 2022 at 10:04 AM Walsh, Jonathan <Walsh.Jonathan@epa.gov> wrote:

Hi Kristine,

I was going over a list of open items and just wanted to let you know that I'm still available should anyone from your company want to talk about using phosphogypsum.

Thanks,

Jon

From: Walsh, Jonathan
Sent: Wednesday, September 14, 2022 10:59 AM
To: kristine@travertinetech.com
Cc: Bacon, Stefanie <Bacon.stefanie@epa.gov>
Subject: Phosphogypsum research

Kristine,

I'm the program lead for the radionuclide NESHAPs, and your question regarding phosphogypsum research came to me.

The relevant requirements for indoor research are found at 40 CFR §61.205 (<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-R/section-61.205>). Approval of a specific research activity by EPA is not required provided that the research activities occur indoors in a controlled environment, no single research activity involves more than 3182kg of phosphogypsum, and record keeping and labeling requirements are met.

The approval process under §61.206 (<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-61/subpart-R/section-61.206>) would be required if your research does not fall within those criteria.

I'm happy to have a discussion about the requirements at your convenience.

Thanks,

Jon

Jonathan P. Walsh, CHP

Physical Scientist

U.S. EPA, Radiation Protection Division

Center for Waste Management and Regulations

202-343-9238

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1900 55th St, Suite A-105 | Boulder, CO 80301

5/15/2023

From: "Bronstein, Kate" <kbronstein@rti.org>
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 3/3/2023 1:08:42 PM
Subject: RE: STEPS

Hi Jon,

Thank you for reaching out! I asked my colleague Micaela Hayes who is part of the RTI STEPS team coordinating the working groups to get in touch with you today to provide some more details. I'm helping connect her with some technical experts in the mining space and am not well-versed on the STEPS project or else I'd give you a call.

Thanks again,
Kate

Kate Bronstein
Research Environmental Engineer
RTI International (www.rti.org)
Office: 919.541.7433 | Mobile: 610.217.4604

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Friday, March 3, 2023 11:51 AM
To: Bronstein, Kate <kbronstein@rti.org>
Subject: STEPS

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Kate,

Your email to Barb Butler made its way to me. I'm the staff lead for the regulation of phosphogypsum under the Clean Air Act. If you have a moment to talk about the project, I'll do what I can to help, and offer whatever other contacts I may have. I'm available most of today.

Thanks,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: "Kristine Parra" <kristine@travertinetech.com>
 To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
 Date: 3/22/2023 3:28:43 PM
 Subject: Receiving phosphogypsum from international sources - R&D use

Hi Jon,

Thanks again for helping us at Travertine coordinate discussion of PG beneficial use with your team.

We are still working on some R&D scale usage of PG in our lab and are hoping to receive some PG material from Finland.

The company we are working with have supplied to us radioactivity data that was approved under the Finnish counterpart for radiation safety (STUK) and I'm wondering if it will satisfy 61.207 of Subpart R. From what they were able to provide on STUK regulations, similar guidelines of testing are required, but they don't define sampling as explicitly as the EPA does.

Their tested levels for their gypsum (Kipsi) are below:




Testausseoste 2 (3)

25.05.2020 109/7020/2020

Mittauksen kohde	Referenssipäivä*	Nuklidi	Tulos ± epävarmuus
teollisuustuotteet 16993E Kipsi (PKEMUW)	19.03.2020	Ra-228	3,7 ± 0,7 Bq/kg
		Ra-226	3,2 ± 0,6 Bq/kg
		Pb-210	2,2 ± 0,8 Bq/kg
		K-40	2,4 ± 0,9 Bq/kg
		Th-228	4,1 ± 0,4 Bq/kg
		Pa-234m	< 11,2 Bq/kg

and for their ore (Malmi) are here:

teollisuustuotteet 16037S Malmi	3.12.2019	K-40	1430 ± 170 Bq/kg
		Pb-210	< 3 Bq/kg
		Ra-226	7,2 ± 0,5 Bq/kg
		Ra-228	7,4 ± 0,6 Bq/kg
		Th-228	7,3 ± 0,5 Bq/kg
		Th-232	7,3 ± 0,5 Bq/kg
		U-238	< 40 Bq/kg

And they sent translated details of STUK required testing methods:

Radioactivity measurements of industrial materials and waste are mainly carried out by gamma spectrometry. The measurements determine the activity concentrations for the natural series of uranium (U-238) and thorium (Th-232), as well as for natural potassium (K-40). At the same time, the environmental cesium (Cs-137) from the deposition is also determined. If necessary, the samples are also subjected to radiochemical assays, e.g. determination of the activity concentration of polonium (Po-210). If the material has arisen as a result of industrial processes, it may require separate additional studies.

Radioactivity measurement of industrial materials and waste can be done from solid, liquid and air samples. Industrial materials may include, for example, raw materials from industrial processes, by-products, end products, waste, water discharges, deposits accumulated in equipment or pipelines, and flue gas filters. The sample materials may come from, for example: mining, ore processing, metal production, groundwater production facilities, production of phosphoric acid or fertilizers, boilers or filters for peat and coal-fired power plants.

The study is suitable, for example, for practices that are obliged to investigate radiation exposure in accordance with the Radiation Act (Section 146 of the Radiation Act). In the case of waste, the examination will determine whether the waste treatment requires STUK's approval (Section 84 of the Radiation Act).

Surveys on ash from power plants are ordered using the construction products and ash radioactivity measurement form, which can be found on the page [Construction products and ash](#).

- [Säteilylaki 859/2018 \(Finlex.fi\)](#)
- [STUK Regulation S/6/2022 \(Stuklex.fi\)](#)

NORM Research Packages for Industrial Materials or Waste

NORM research package for liquid samples:

- Demanding gamma analysis
- Radium (Ra-226) radiokemiallisesti nestetuikelaskennalla
- Uranium (U-238) and thorium (Th-232) by ICP-MS

NORM study package for solid samples:

- Demanding gamma analysis
- Uranium (U-238) and thorium (Th-232) by ICP-MS (from processed samples)

I'm wondering if these samples and testing would satisfy the guidelines for Subpart R, or if they would be below threshold considering their Ra-226 activity is about 2 orders of magnitude below the regulated 0.37 Bq/g.

Quantities we hope to receive would be very small (likely around 5-10 kg), but we want to make sure what we do receive is in compliance with federal regulations.

Your continued guidance is very appreciated.

Thanks,
Kristine

--

 TRAVERTINE

Kristine Parra (she/her)

Laboratory Manager | travertinetech.com

1900 55th St, Suite A-105 | Boulder, CO 80301

From: ["Bacon, Stefanie\" \(she/her/hers\)\"](#)
To: ["Walsh, Jonathan" <Walsh.Jonathan@epa.gov>](#)
Date: 1/31/2023 3:18:08 PM
Subject: Draft Mosaic Communications Plan

Good afternoon Jon,

To follow-up on our call this afternoon, below is the G drive location where you can find the draft Mosaic Fertilizer communications plan. This document is sure to evolve over time, but I expect that the primary copy of the document will remain in this location (b) (5)

Please let me know if you have any questions!

Thanks,
Stefanie

From: "Rustick, Joseph"
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 3/9/2023 9:59:27 AM
Subject: FW: Latest on Mosaic?

From: Rustick, Joseph
Sent: Thursday, March 9, 2023 10:59 AM
To: Peake, Tom <Peake.Tom@epa.gov>
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>
Subject: RE: Latest on Mosaic?

Ok here's what I have so far on Mosaic. Jon (and then the rest of us) are continuing to go through the comments on the completeness document, and is also taking the first cut of the technical review document. He held a meeting of the working group last week where he shared the document visually but has not distributed it yet. He also tried to set up a meeting with Monica Gibson, though it's unclear from the emails if this meeting happened or not. We didn't talk about too much additional Mosaic material on Monday as Jon was focused on getting ready for his surgery, and it's unclear if him and I are going to meet tomorrow, so for now there won't be much additional to add for this week, but I'll bring up Mosaic for discussion on our call next Monday.

From: Peake, Tom <Peake.Tom@epa.gov >
Sent: Thursday, March 9, 2023 10:43 AM
To: Rustick, Joseph <rustick.joseph@epa.gov >
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >
Subject: RE: Latest on Mosaic?

Thanks.

From: Rustick, Joseph <rustick.joseph@epa.gov >
Sent: Thursday, March 9, 2023 10:39 AM
To: Peake, Tom <Peake.Tom@epa.gov >
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >
Subject: RE: Latest on Mosaic?

Hi Tom,

I'm going back through my emails now to capture everything, there was some movement last week while we were at Waste Management. Nothing new this week with Jon out and we didn't talk much about it on our Monday call, so it's just work from last week.

-Joe

From: Peake, Tom <Peake.Tom@epa.gov >
Sent: Thursday, March 9, 2023 10:00 AM
To: Rustick, Joseph <rustick.joseph@epa.gov >
Cc: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >
Subject: Latest on Mosaic?

Joe,
Since Jon is out I will pester you. What is the latest on the Mosaic review?
Thanks.

Tom

Tom Peake (he/him)
Director, Center for Waste Management and Regulations
Cell phone: 202-465-5904
Office phone: 202-343-9765
Office: 6450 D WJC North

From: "Peake, Tom"
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
 "Schultheisz, Daniel" <Schultheisz.Daniel@epa.gov>
 "Rustick, Joseph" <rustick.joseph@epa.gov>
Date: 3/15/2023 9:48:49 AM
Subject: RE: completeness letter

Lee wants it to go to ARLO.

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Wednesday, March 15, 2023 8:53 AM
To: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>
Subject: RE: completeness letter

OK, thanks. I'll get it on its way, as long as Lee and ARLO don't need to look it over.

From: Peake, Tom <Peake.Tom@epa.gov >
Sent: Wednesday, March 15, 2023 8:51 AM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Rustick, Joseph <rustick.joseph@epa.gov >
Subject: RE: completeness letter

Jon,
 It looks good to me. I added my name and Monica Gibson's name to the cc list.
 If you send it today remember to change the date from March 16 to March 15. I think go ahead and accept the changes and send it to Patricia for final formatting, unless she has already formatted it.

Tom

Tom Peake (he/him)
 Director, Center for Waste Management and Regulations
 Cell phone: 202-465-5904
 Office phone: 202-343-9765
 Office: 6450 D WJC North

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov >
Sent: Wednesday, March 15, 2023 8:44 AM
To: Peake, Tom <Peake.Tom@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Rustick, Joseph <rustick.joseph@epa.gov >
Subject: RE: completeness letter

From: Peake, Tom <Peake.Tom@epa.gov >
Sent: Wednesday, March 15, 2023 8:43 AM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Rustick, Joseph <rustick.joseph@epa.gov>
Subject: RE: completeness letter

I can't access the file.

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov >
Sent: Tuesday, March 14, 2023 3:52 PM
To: Peake, Tom <Peake.Tom@epa.gov >; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov >; Rustick, Joseph <rustick.joseph@epa.gov >
Subject: completeness letter

Here is a rough draft of a completeness letter to Mosaic. Thoughts?

Jon

5/15/2023

From: "Bennett, Karen" <Karen.Bennett@lewisbrisbois.com>
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 3/6/2023 4:21:29 PM
Subject: RE: Florida legislation would allow phosphogypsum use in roads — if feds approve

Thanks Jon, I've reached out to Mosaic. We'll get back on this



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative
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From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Monday, March 6, 2023 3:47 PM
To: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Subject: [EXT] RE: Florida legislation would allow phosphogypsum use in roads — if feds approve

Hi Karen,

As I went through the materials we have, I did note two things that may eventually be helpful, if they are available:

- Specific monitoring plans for personnel dosimetry and radon measurements, as described on p. 4 of Appendix 10, Monitoring Plan
- Laboratory analytical data packages for the Ra-226 data presented in Appendix 12, New Wales Stack Data

To be clear, I don't view them as necessary to the completeness review, and this request will not slow its pace. The information will eventually need to go in the record.

Thank you,
Jon

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Monday, March 6, 2023 2:51 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: RE: Florida legislation would allow phosphogypsum use in roads — if feds approve

Thanks for the update and let me know if there is PG info you need—Mosaic may have what you need.



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law Practice |
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From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Monday, March 6, 2023 2:15 PM
To: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: [EXT] RE: Florida legislation would allow phosphogypsum use in roads — if feds approve

Thank you, Karen. I did note the press release on the proposed legislation made by the Center for Biological Diversity last we, and we have read over the bills. I actually went looking for news related to phosphogypsum use because we recently fielded some press inquiries on the topic. We stated that we have received an application for a pilot project, and that we were currently reviewing it for completeness.

Jon

From: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Sent: Monday, March 6, 2023 2:06 PM
To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Cc: Veal, Lee <Veal.Lee@epa.gov>
Subject: FW: Florida legislation would allow phosphogypsum use in roads — if feds approve

Hi Jon,
We are sending this article for awareness-discusses legislation introduced in Florida that would allow PG use in roads, assuming federal authorization to do so. Center for Biological Diversity has opposed-no surprise but this could heighten scrutiny of anything EPA determines. I do not have details on the timing or likelihood of the legislation passing.

Karen

Begin forwarded message:



Karen Bennett
Partner | Co-Chair of the Environmental and Administrative Law Practice |
Co-Chair Government Relations Practice
Karen.Bennett@lewisbrisbois.com

T: 202.558.0658 F: 202.558.0654 M: 202.255.0291

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From: POLITICO Pro Florida <alert@email.politicopro.com>
Date: March 1, 2023 at 4:43:16 PM EST

Subject: Florida legislation would allow phosphogypsum use in roads — if feds approve
Reply-To: "POLITICO, LLC" <reply-fe831d777760037a7d-553241_HTML-1241248979-1376319-19633@politicoemail.com>

\u-257 ?

Florida legislation would allow phosphogypsum use in roads — if feds approve

BY BRUCE RITCHIE | 03/01/2023 04:42 PM EST



Vehicles are driven along I-95 on January 10, 2022 in Miami, Florida. | Joe Raedle/Getty Images

TALLAHASSEE, Fla. — Two Republican committee chairs filed bills this week that would allow a mildly-radioactive fertilizer byproduct to be used in making roads — if approved by federal officials.

Critics say such proposals to reuse phosphogypsum would create "radioactive roads." But Rep. Lawrence McClure (R-Dover), the bill sponsor, said Wednesday that his bill, [FL HB1191 \(23R\)](#), only calls for a study and would allow use only under U.S. Environmental Protection guidelines.

"I don't know how this is really much of a debate even really — right?" McClure, chair of the House State Affairs Committee, told POLITICO. "It seems to make all the sense in the world."

Sen. Jay Trumbull (R-Panama City), chair of the Senate Committee on Commerce and tourism, on Tuesday filed the Senate companion bill, [FL SB1258 \(23R\)](#).

But the Center for Biological Diversity this week [called the legislation](#) "an outrageous handout" for the phosphate mining industry.

And a spokeswoman for fertilizer-producing giant The Mosaic Co. said Wednesday the company requested the legislation because it would move the U. S. towards recycling phosphogypsum, which she said is not a radioactive threat.

In June 2021, the EPA, at the request of environmental groups, [reversed a decision](#) made in the final weeks of former President Donald Trump's administration to allow the use of phosphogypsum in road projects.

Phosphogypsum is stored in towering mounds called "stacks" across central Florida where phosphate rock is mined for fertilizer production. The safety threat posed by the stacks was the focus of public attention in 2021 after a wastewater pond at the site of a phosphate plant in Piney Point leaked and threatened catastrophic flooding.

Ragan Whitlock, a lawyer with the Center for Biological Diversity, told POLITICO on Wednesday the EPA had not taken action since the 2021 reversal. An EPA

spokesperson said Wednesday she was trying to gather information for an update on the issue.

Filed in Congress last November, [S. 5128 \(117\)](#) directs the EPA to approve phosphogypsum use in roads. The bill has not been heard by a Senate committee.

The state legislation instead would require Florida Department of Transportation to conduct a study by Jan. 1, 2024 on the use of phosphogypsum as a material. Whitlock said the study would appear to be rushed.

"If this bill becomes law, Florida roads would become ticking time bombs, waiting for the next storm event to expose our communities and waterways to this radioactive waste," Whitlock said in a statement issued Tuesday by his group.

McClure responded that critics of the legislation should present their science for debate if they think phosphogypsum used in roadways is a threat. "We've got to do a little better I think sometimes than 'We don't like it,'" he said.

Jackie Barron, stakeholder outreach director for Mosaic, said 20 countries already use phosphogypsum in roads and it is a safe method for recycling the waste byproduct.

"This just starts us in a direction of catching up with the rest of the civilized world when it comes to beneficial use of this material," Barron said. "It's just not sustainable to keep piling this stuff up unnecessarily just because it might make for a good narrative for someone else."

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From: "Santillan, Jay (he/him/his)"
To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
Date: 2/23/2023 9:59:49 AM
Subject: RE: Mosaic and Kds

Sounds good. I'll give it a look and get back to you by tomorrow at the earliest.

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Thursday, February 23, 2023 10:58 AM
To: Santillan, Jay (he/him/his) <Santillan.Jay@epa.gov>
Subject: Mosaic and Kds

Hi Jay,

FYI - I pulled out some of the information on geochemical modeling from Mosaic's response and looked up the referenced article (attached). If you have chance to look over it, I would be very interested to hear your thoughts. I'm not sure how far we have to go on this pilot study, but long term I think we would be well-served to develop a better understanding of interactions between phosphogypsum and groundwater.

- Jon

2. Selection of model parameters such as local pH, the ionic strength of the solution, the magnitude of leachate concentrations, and the density of soil sorption sites. We will be using EPA's IWEM2 for the fate and transport modeling. Dr. Townsend has used the model in similar projects (with different materials) in beneficial use risk assessments provided to FDEP. The magnitude of leachate concentrations used as inputs to the model will be those results from EPA Method 13163, liquid-solid partitioning as a function of liquid-to-solid ratio in solid materials using a parallel batch procedure. With respect to other model parameters (local pH, the ionic strength of the solution, the magnitude of leachate concentrations, and the density of soil sorption sites), default parameters in IWEM will be applied. The partition coefficients (kd) used, however, are based on site specific testing between leachates from the blends and soils collected from the pilot project site following a method previously published by Dr. Townsend's group.⁴ Thus, while we are not estimating site specific parameters such as density of soil sorption sites, we are going beyond most typical beneficial use assessments to incorporate material- and soil[1]specific partitioning data.

From: Walsh, Jonathan
Sent: Friday, February 17, 2023 1:21 PM
To: Rustick, Joseph <rustick.joseph@epa.gov>; Egidi, Philip <Egidi.Philip@epa.gov>; Stuenkel, David <Stuenkel.David@epa.gov>; Santillan, Jay (he/him/his) <Santillan.Jay@epa.gov>; Mills, Jason <Mills.Jason@epa.gov>; Bacon, Stefanie (she/her/hers) <Bacon.stefanie@epa.gov>; Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Anderson, Lea (she/her/hers) <anderson.lea@epa.gov>; Generette, Lloyd <Generette.Lloyd@epa.gov>; Freeman, Caroline <Freeman.Caroline@epa.gov>; Richards, Jon M. <Richards.Jon@epa.gov>; Rinck, Todd (he/him/his) <Rinck.Todd@epa.gov>; Porter, Brooke <Porter.Brooke@epa.gov>; Price, Michelle (she/her/hers) <Price.Michelle@epa.gov>; Russell, Bethany <Russell.Bethany@epa.gov>; Housman, Van <Housman.Van@epa.gov>; Villamizar, Nicole (she/her/hers) <Villamizar.Nicole@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>; Birchfield, Norman <Birchfield.Norman@epa.gov>; Abrams, Nancy <Abrams.Nancy@epa.gov>; Suarez, Lana (she/her/hers) <Suarez.Lana@epa.gov>; Marks, Matthew <Marks.Matthew@epa.gov>; Jordan, Sarah <Jordan.Sarah@epa.gov>; McFarley, Jake <mcfarley.jake@epa.gov>; Rebersak, Shannon (she/her/hers) <rebersak.shannon@epa.gov>; Edmonds, Marc <Edmonds.Marc@epa.gov>
Subject: Mosaic phosphogypsum pilot project

All,

Mosaic responded to our questions in late December – the document they sent was attached. Please look for calendar invitations reconvening the workgroup in the coming weeks.

The next step, per our guidance, is to make a determination whether we have a complete application. Section 2.4 of the Workbook identifies three elements of a completeness review:

- A demonstration that the potential radiological risk from the alternative use is at least as protective as placement of phosphogypsum in a stack or mine
- A description of the proposed monitoring scheme covering both radiological and non-radiological parameters, with

sufficient detail to demonstrate that the project does not adversely affect the environment, or a justification for why monitoring is not needed

- Some discussion and documentation that the description of the project lies within generally accepted methodologies for such research, and that the proposed use is legitimate (i.e. not considered "disposal")

Additionally, Appendix B of the Workbook includes the following completeness checklist:

PETITION COMPLETENESS CHECKLIST

Does your petition contain the following information?

- The name and address of the person(s) making the request.
- A description of the proposed use(s), including the following:
 - . A detailed description of the small-scale study (field test, control test, QA/QC plans, illustrative diagrams/pictures)
 - . How the phosphogypsum will be handled or processed during each stage of the study, including closure (if applicable)
 - . Goals of the study and how performance will be measured
 - . Characteristics of the phosphogypsum to be used (radium-226 concentration, as defined below, as well as analyses of other characteristics of the waste such as toxic or hazardous constituents and mobility of constituents, presence of hazardous air pollutants)
 - . Notice that the analyses described above exist, and provide those analyses to any potential user upon request.
- The location of each facility, including suite and/or building number, street, city, county, state, and zip code, where any use, handling, or processing of the phosphogypsum will take place. If the mailing address is different, provide it too.
- The quantity of phosphogypsum to be used by each facility.
- The average concentration of radium-226 in the phosphogypsum to be used. This information may be available from the owner of the stack. The sampling must have been done within the past 12 months according to the procedures in 40 CFR 61.207. Include a copy of the necessary 40 CFR 61.208 certification with your petition.
- A description of any measures which will be taken to prevent the uncontrolled release of radium-226, radon, or other hazardous constituents into the environment. This includes description of any monitoring plans for air and water pathways and worker exposure, leak prevention programs, and QA/QC measures.
- An estimate of the maximum individual risk and incidence associated with the proposed use, including the ultimate disposition of the phosphogypsum or any product in which the phosphogypsum is incorporated. Include a copy of the risk assessment procedures, assumptions, and results. If you use a non-EPA model, provide a copy of the model and all needed documentation to understand and use the model.
- How the phosphogypsum will be handled at the study site, including procedures to prevent unauthorized access and handling of excess materials.

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- Description of the effectiveness and benefit of the proposed use.
- Description of any other Federal, state, and/or local requirements affected by the proposed use and how they will be satisfied.
- Correspondence with Federal, State, County or municipal authorities charged with administering those requirements.
- Description of any recordkeeping and reporting procedures, including the certification requirements, and how they will be met.
- Each request shall be signed and dated by a corporate officer or public official in charge of the facility.

Thanks for your participation. I'll be in touch soon.

Jon

From: Walsh, Jonathan

Sent: Wednesday, August 3, 2022 3:18 PM

To: Rustick, Joseph <rustick.joseph@epa.gov>; Egidi, Philip <Egidi.Philip@epa.gov>; Stuenkel, David <Stuenkel.David@epa.gov>; Santillan, Jay <Santillan.Jay@epa.gov>; Mills, Jason <Mills.Jason@epa.gov>; Bacon, Stefanie <Bacon.stefanie@epa.gov>; Tom Peake <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Anderson, Lea <anderson.lea@epa.gov>; Generette, Lloyd <Generette.Lloyd@epa.gov>; Hodoh, Ofia <Hodoh.Ofia@epa.gov>; Freeman, Caroline <Freeman.Caroline@epa.gov>; Richards, Jon M. <Richards.Jon@epa.gov>; Rinck, Todd <Rinck.Todd@epa.gov>; Porter, Brooke <Porter.Brooke@epa.gov>; Price, Michelle <Price.Michelle@epa.gov>; Russell, Bethany <Russell.Bethany@epa.gov>; Housman, Van <Housman.Van@epa.gov>; Villamizar, Nicole <Villamizar.Nicole@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>; Birchfield, Norman <Birchfield.Norman@epa.gov>;

5/15/2023

Abrams, Nancy <Abrams.Nancy@epa.gov>; Suarez, Lana <Suarez.Lana@epa.gov>; 'Marks, Matthew' <marks.matthew@epa.gov>; Jordan, Sarah <Jordan.Sarah@epa.gov>; McFarley, Jake <mcfarley.jake@epa.gov>; Rebersak, Shannon <rebersak.shannon@epa.gov>; Edmonds, Marc <Edmonds.Marc@epa.gov>

Subject: RE: Phosphogypsum in Road Use - NESHAPs review

All,

Thank you to those who have submitted comments. Just a reminder that we request comments on the completeness of the application by this Friday, 8/5. If you have significant comments and can't make the deadline, please let me know.

Thanks,
Jon

From: Walsh, Jonathan

Sent: Monday, July 11, 2022 2:49 PM

To: Rustick, Joseph <rustick.joseph@epa.gov>; Egidi, Philip <Egidi.Philip@epa.gov>; Stuenkel, David <Stuenkel.David@epa.gov>; Santillan, Jay <Santillan.Jay@epa.gov>; Mills, Jason <Mills.Jason@epa.gov>; Bacon, Stefanie <Bacon.stefanie@epa.gov>; Tom Peake <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Anderson, Lea <anderson.lea@epa.gov>; Generette, Lloyd <Generette.Lloyd@epa.gov>; Hodoh, Ofia <Hodoh.Ofia@epa.gov>; Freeman, Caroline <Freeman.Caroline@epa.gov>; Richards, Jon M. <Richards.Jon@epa.gov>; Rinck, Todd <Rinck.Todd@epa.gov>; Porter, Brooke <Porter.Brooke@epa.gov>; Price, Michelle <Price.Michelle@epa.gov>; Russell, Bethany <Russell.Bethany@epa.gov>; Housman, Van <Housman.Van@epa.gov>; Villamizar, Nicole <Villamizar.Nicole@epa.gov>; Chow, Rita <Chow.Rita@epa.gov>; Birchfield, Norman <Birchfield.Norman@epa.gov>; Abrams, Nancy <Abrams.Nancy@epa.gov>; Suarez, Lana <Suarez.Lana@epa.gov>; Marks, Matthew <marks.matthew@epa.gov>; Jordan, Sarah <Jordan.Sarah@epa.gov>; McFarley, Jake <mcfarley.jake@epa.gov>; Rebersak, Shannon <rebersak.shannon@epa.gov>; Edmonds, Marc <Edmonds.Marc@epa.gov>

Subject: Phosphogypsum in Road Use - NESHAPs review

Dear Workgroup Members,

Thank you for supporting ORIA's review of Mosaic's application, and for attending our initial meeting on June 16. If your organization has not done so yet, please send me an email identifying a primary point of contact for this review, other participants, and their first-line supervisor(s). Thanks to those that have already done so.

(b) (5)



We request all initial comments no later than Friday August 5. Please submit comments only by using the spreadsheet. I did receive two comments via email during initial conversations about the application and entered those into the spreadsheet. Do not email any other completeness comments; I will be unable to keep track of them. Keep in mind that this review is limited to the issues related to the Subpart R NESHAP and addressed in our guidance workbook. We will address other issues (e.g. issues related to the RCRA consent decree and public outreach) through parallel processes.

The Mosaic application and workbook are attached for your reference. Background documents, including the TFI risk assessment and EPA's analyses, are located on RPD's web page at <https://www.epa.gov/radiation/request-use-phosphogypsum-government-road-projects-supporting-documents>. I will send out a separate invitation for a recurring meeting to discuss any questions and issues related to the review.

Thank you for your help,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

5/15/2023

From: "Bennett, Karen" <Karen.Bennett@lewisbrisbois.com>
 To: "Walsh, Jonathan" <Walsh.Jonathan@epa.gov>
 Date: 3/6/2023 12:54:35 PM
 Subject: RE: Mosaic PG application review - milestones and timing

Hi Jonathan,

We are disappointed with the pace the review process has taken but Mosaic is committed to seeing this through. As you know, the pilot project is a part of a much broader environmental solution in which we have made significant investment.

We look forward to receiving the completion letter in early March and in addition, we would like to participate in any internal briefings, etc. where appropriate.

Thank you,
 Karen



Karen Bennett
 Partner | Co-Chair of the Environmental and Administrative
 Law Practice | Co-Chair Government Relations Practice
 Karen.Bennett@lewisbrisbois.com

T: 202.558.0658 F: 202.558.0654 M: 202.255.0291

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From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Tuesday, February 21, 2023 12:06 PM
To: Bennett, Karen <Karen.Bennett@lewisbrisbois.com>
Subject: [EXT] Mosaic PG application review - milestones and timing

Hello Karen,

Lee reminded me last week to follow up with you concerning the schedule for review of Mosaic's request. The following is my own best estimate, assuming that no issues are raised by the technical workgroup, legal team, or executive decision-makers that cannot be readily resolved. Any approval will be the result of the complete, deliberative process.

The 2005 Workbook divides the review process into a completeness review and a technical review, and states that the EPA will notify the applicant when it finds that it has a complete request and is beginning its technical review. Based on my personal review of the materials that Mosaic has submitted, I am hopeful that we can achieve workgroup concurrence that the request is complete in early March, and transmit that determination to you and Mosaic.

The first aspect of the technical review will be for the workgroup to finalize EPA's technical, communications, and briefing products. This is the part of the process that is most within ROD's control. I anticipate it to take approximately 8 weeks following the completeness determination. At that point, briefings and reviews will drive the timeline. Legal review will be performed by the Air and Radiation Law Office. Following that, it will need to be briefed up to Joe Goffman, Principal Deputy Assistant Administrator for OAR. If Joe Goffman receives Senate confirmation by that time, it will be his decision to sign a notice of pending approval (or a formal disapproval) and open a 30-day public comment period. I would hope that legal review could be accomplished in approximately a month, and upper management review on a similar timeline. I will certainly keep you updated as we move towards each project milestone.

Thanks,
 Jon

Jonathan P. Walsh, CHP
 Physical Scientist
 U.S. EPA, Radiation Protection Division
 Center for Waste Management and Regulations
 202-343-9238

5/15/2023

From: ["Gibson, Monica"](#)

To: ["Schultheisz, Daniel"](#) <Schultheisz.Daniel@epa.gov>
["Walsh, Jonathan"](#) <Walsh.Jonathan@epa.gov>

Date: 3/16/2023 12:28:01 PM

Subject: RE: Mosaic pilot project request - completeness letter for review

Ah. Thanks for that background.

From: Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>

Sent: Thursday, March 16, 2023 1:20 PM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>; Gibson, Monica <Gibson.Monica@epa.gov>

Cc: Peake, Tom <Peake.Tom@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>

Subject: RE: Mosaic pilot project request - completeness letter for review

Monica:

To offer some context, in the early 2000s there were complaints that EPA's process for evaluating alternate use requests was vague and open-ended, and that the Agency was seemingly unwilling to approve any request. We similarly had numerous frustrating interactions with applicants regarding the proper development of risk assessments and the willingness (or ability) of applicants to provide the information we said was needed. A Congressional subcommittee got involved and we committed to developing a process that was clear and manageable and that applicants could use to guide their requests. The workbook is the result of that effort.

Hope this helps.

Dan Schultheisz

U.S. Environmental Protection Agency

Office of Radiation and Indoor Air

Radiation Protection Division

(202) 343-9349

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Sent: Thursday, March 16, 2023 1:07 PM

To: Gibson, Monica <Gibson.Monica@epa.gov>

Cc: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>

Subject: RE: Mosaic pilot project request - completeness letter for review

Hi Monica,

The regulation is quite brief on the approval process. §61.206(c) states only that "The Assistant Administrator for Air and Radiation may decide to grant a request that EPA approve distribution and/or use of phosphogypsum if he determines that the proposed distribution and/or use is at least as protective of public health, in both the short term and the long term, as disposal of phosphogypsum in a stack or a mine." The reg also sets record-keeping requirements for approved uses and goes on to state that the AA can impose terms and conditions or relieve the recordkeeping requirements as part of an approval. Both the completeness process and public comment process were conceived in the guidance document.

I will accept your edits and send this to Lee Veal for final approval.

Thanks,

Jon

From: Gibson, Monica <Gibson.Monica@epa.gov>

Sent: Thursday, March 16, 2023 12:56 PM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Cc: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>

Subject: RE: Mosaic pilot project request - completeness letter for review

Hi –

5/15/2023

A couple of suggested edits. Also, I see the process described in the second paragraph in the workbook, but could you point me to it in the regulations?

Thanks!

Monica

Monica Derbes Gibson
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington DC 20460
202-329-4515 (m)

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>
Sent: Wednesday, March 15, 2023 11:14 AM
To: Gibson, Monica <Gibson.Monica@epa.gov>
Cc: Peake, Tom <Peake.Tom@epa.gov>; Schultheisz, Daniel <Schultheisz.Daniel@epa.gov>; Rustick, Joseph <rustick.joseph@epa.gov>
Subject: Mosaic pilot project request - completeness letter for review

Hello Monica,

RPD management has asked that we document our completeness determination via letter, and also that you review it before it goes out. As a reminder, this step is not a requirement of the regulation, but an administrative step that we identified in our guidance document. Feel free to call me on Teams if you have any questions.

Thanks,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)

From: ["Walsh, Jonathan"](#)

To: ["Rustick, Joseph" <rustick.joseph@epa.gov>](#)

Date: 3/21/2023 10:18:22 AM

Subject: RE: would you be ok saying a few words on the Mosaic application at the regional call?

Yes, I can do an update on phosphogypsum.

From: Rustick, Joseph <rustick.joseph@epa.gov>

Sent: Tuesday, March 21, 2023 10:14 AM

To: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Subject: would you be ok saying a few words on the Mosaic application at the regional call?

Hi Jon,

I was talking with Lee yesterday about the regional call today, and she suggested I ask you if you would be ok saying a few words on the Mosaic application as part of the HQ updates? No worries if you don't want to say anything at this time, Lee doesn't want you to speak before you're ready but thought if you were comfortable it might be something worth sharing.

-Joe

From: ["Holden, Patricia"](#)

To: ["Walsh, Jonathan" <Walsh.Jonathan@epa.gov>](#)

Date: 3/17/2023 9:10:19 AM

Subject: FW: letter to Mosaic

Attachments: Mosaic_completeness_Letter_3-17-2023.docx

Good Morning Jon,

The only thing I changed was the cc: line, other than that the letter was good. attached letter was formatted correct.

Patricia

From: Walsh, Jonathan <Walsh.Jonathan@epa.gov>

Sent: Friday, March 17, 2023 9:54 AM

To: Holden, Patricia <Holden.Patricia@epa.gov>

Cc: Rustick, Joseph <rustick.joseph@epa.gov>

Subject: letter to Mosaic

Good Morning Patricia,

I am writing for your help with this letter. I have prepared many for Lee to sign, but never one for my own signature. Will you please help me with final formatting and signature?

Lee and ARLO have reviewed it and it is otherwise ready to go. I can send the email with the signed letter.

Thanks,
Jon

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations
202-343-9238
202-841-9880 (mobile)



UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY
Washington, DC 20460

March 17, 2023

Mr. Patrick Kane
Vice President, Operations Services
Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, Florida 33547

OFFICE OF
AIR AND
RADIATION

Dear Mr. Kane:

The U.S. Environmental Protection Agency has completed a preliminary review of Mosaic Fertilizer, LLC's "Request for Approval of Additional Uses of Phosphogypsum Pursuant to 40 CFR §61.206, Small-scale Road Pilot Project on Private Land in Florida," which was submitted to the Agency on March 31, 2022. We have also completed a preliminary review of supplemental materials related to this request submitted by Mosaic on December 22, 2022. The Agency finds that these materials, together with the information incorporated by reference, satisfy the requirements of 40 CFR §61.206(b) and therefore constitute a complete request. This letter serves as notification that EPA has reached this decision and is now starting its formal technical review of your request. During the technical review, EPA may reach out for additional information or clarification.

Once the technical review is complete, the next step in the process will be for EPA to issue a notice of pending approval or a notice of disapproval. Upon issuance of a notice of pending approval, EPA would open a public comment period on its proposed decision and directly notify stakeholders. EPA's complete process is described in Section 2.4 of the 2005 guidance document "Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR 61.206, A Workbook."

If you have any questions, please contact me at (202) 343-9238 or walsh.jonathan@epa.gov.

Sincerely,

Jonathan P. Walsh
Physical Scientist
Center for Waste Management and Regulations

cc: Electronic Distribution
Karen Bennett, Lewis Brisbois
Lee Veal, EPA
Jonathan Edwards, EPA
Tom Peake, EPA
Monica Gibson, EPA

From: ["Walsh, Jonathan"](#)

To: ["Russell, Bethany" <Russell.Bethany@epa.gov>](#)
["Mills, Jason" <Mills.Jason@epa.gov>](#)

Date: 1/12/2023 10:32:16 AM

Subject: Mosaic PG application

Attachments: Walsh EPA Petition 12-9-22 4890-0854-1763 v.1.pdf

Hi Jason and Bethany,

Mosaic has submitted additional material concerning its proposed road project. My next priority on the project is to meet with both of you and hold a staff-level discussion about each program office's major concerns and review responsibilities. Would a week from today be too soon?

Thanks,
Jon

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Pat Kane
Vice President, EHS – Global
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Tel (813) 500-6957
www.mosaicco.com

Jonathan P. Walsh, CHP
Physical Scientist
U.S. EPA, Radiation Protection Division
Center for Waste Management and Regulations

Re: Response to EPA September 9, 2022 Request for Information; Small-Scale Pilot Project

Mosaic Fertilizer, LLC (Mosaic) provides the enclosed information in response to a September 9, 2022 U.S. Environmental Protection Agency (EPA) request for additional information related to consideration of Mosaic's Request for Approval of a Small-Scale Pilot Road Project on Private Land submitted on March 31, 2022. EPA's request is intended to help the agency reach a completeness determination consistent with EPA's 2005 Workbook, *Applying to EPA for Approval of Other Uses of Phosphogypsum: Preparing and Submitting a Complete Petition Under 40 CFR §61.206*. EPA's information requests and Mosaic's responses are set forth below.

Background

Mosaic has proposed to perform a small-scale pilot study on the use of phosphogypsum (PG) in road construction on land owned and controlled by Mosaic. The purpose of the study is to demonstrate the beneficial use of PG as an ingredient in engineered road base under the Florida Standard Specifications for Road and Bridge Construction. The pilot study is designed to simulate variable use conditions as much as possible.

Mosaic has been working with the University of Florida (Engineering School of Sustainable Infrastructure and Environment; Dr. Timothy Townsend, Principal Investigator) to develop the plans and experimental design for the proposed pilot project. The University's research included extensive testing of PG and PG-aggregate blends for both performance and chemical characteristics. The results of this work led to the pilot project being proposed. Mosaic has approached the process for gathering regulatory permission for the pilot project as a two-step process. Step 1 involved submitting the March 31, 2022 Petition requesting EPA approval of the use of PG to perform a small-scale pilot study on land owned and controlled by Mosaic, which remains under review at EPA. Step 2 involves obtaining appropriate regulatory approval from the Florida Department of Environmental Protection (FDEP) for the use of PG in road construction.

No formal request to FDEP will occur until EPA approves the Petition, but we and our experts have been meeting with the Department to discuss the proposal and to understand what information the Department will require to authorize the pilot project. At our request, Dr. Townsend is drafting a technical report that describes the pilot project and includes the supporting data and risk evaluation that we understand the FDEP requires (based on similar projects using other materials in Florida and our conversations with FDEP). This report will include the results of leaching tests on the PG-amended road base mixes that will be used in the pilot project and associated risk assessment modeling. Our responses below are based on what is currently planned in the request that will go to FDEP, but they are subject to change depending on approval requirements by the FDEP.



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EPA seeks information on laboratory tests and modeling related to leaching, including:

1. Radiological and non-radiological constituents of PG to be considered.

Leach tests were performed on the three PG-amended road base mix designs currently planned¹: (1) 50% PGA and 50% RCA, (2) 40% PG and 60% LR, and 50% PG, (3) 43% sand, and 7% cement. The leachates were analyzed for a standard suite of pH, metals (Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Ti, Sr, V, and Zn), ions (sulfate, fluoride), and radium-226. In addition, a subset of leachates was analyzed for the following suite of radionuclides: gross alpha, gross beta, uranium, radium-228, radium-226. The resulting concentrations in the leachates are being used as part of the risk assessment in the request to FDEP. Post-construction monitoring is described below.

2. Selection of model parameters such as local pH, the ionic strength of the solution, the magnitude of leachate concentrations, and the density of soil sorption sites.

We will be using EPA's IWEM² for the fate and transport modeling. Dr. Townsend has used the model in similar projects (with different materials) in beneficial use risk assessments provided to FDEP. The magnitude of leachate concentrations used as inputs to the model will be those results from EPA Method 1316³, liquid-solid partitioning as a function of liquid-to-solid ratio in solid materials using a parallel batch procedure. With respect to other model parameters (local pH, the ionic strength of the solution, the magnitude of leachate concentrations, and the density of soil sorption sites), default parameters in IWEM will be applied. The partition coefficients (kd) used, however, are based on site specific testing between leachates from the blends and soils collected from the pilot project site following a method previously published by Dr. Townsend's group.⁴ Thus, while we are not estimating site specific parameters such as density of soil sorption sites, we are going beyond most typical beneficial use assessments to incorporate material- and soil-specific partitioning data.

3. Any consideration of potential changes in chemical conditions due to components of the test road such as increased leaching of inorganic constituents following depletion of others, mobilization of radionuclides and/or metals due to pH buffering by portlandite cement, enhanced transport due complexation with organic components of asphalt.

The leach tests conducted for the risk assessment to be presented as part of the request to FDEP were performed on blends on the aggregates with the PG as planned for their use in the pilot project. Thus, these leach tests consider any pH differences resulting from the aggregates (such

¹ PG = phosphogypsum from the New Wales stack, RCA = recycled concrete aggregate from a locally sourced supplier, and LR = limerock from a locally sourced supplier. All mixes based on mass.

² <https://www.epa.gov/smm/industrial-waste-management-evaluation-model-version-31>.

³ <https://www.epa.gov/sites/default/files/2015-12/documents/1316.pdf>.

⁴ <https://pubs.acs.org/doi/full/10.1021/acs.est.9b01756>. Material- and Site-Specific Partition Coefficients for Beneficial Use Assessments.



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as RCA and the soil cement mixes). Method 1316 measures constituent concentrations as a function of liquid to solid ratio, so this might provide some insight to possible depletion, but other factors also impact these results. No testing has been performed on how organic chemicals leached from asphalt might impact constituent mobility, but we do not see this as having a major outcome on our risk assessment. A major objective of the pilot project is to collect data from a road where PG is exposed to real-world conditions, thus the results of this pilot project will help provide answers to the questions raised by EPA.

(Please note that on page 18 of the application, indicating that U.S. EPA's Leaching Environmental Assessment Framework (LEAF) and Industrial Waste Management Evaluation Model (IWEM) will be used, the reference (footnote 36) is omitted – this may have clarified some of Mosaic's intentions.)

We apologize for omitting this inadvertently. References for IWEM and LEAF Method 1316 are presented above. In addition, we have included the omitted footnote 36 below:

Available at <https://www.epa.gov/hw-sw846/leaching-environmental-assessment-framework-leaf-methods-and-guidance>.

A detailed groundwater monitoring plan, including:

Groundwater Monitoring Plan

4. Hydrogeology of the area, including aquifer information and expected direction and rate of groundwater flow

The test road will be constructed at the location of an existing road at the New Wales Facility. The road will be constructed outside of the current phosphogypsum stacking operations in an area of formerly mined and now developed land. Numerous hydrogeological evaluations have been conducted at the New Wales Facility over the last 30 years. An overview of hydrogeology relevant to evaluating groundwater quality and monitoring for potential impacts associated with the proposed test road is presented below.

The hydrogeology underlying the proposed test road prior to mining and development as evidenced by test borings drilled at the site, prospect borings, and various United States and Florida Geological Survey publications is characterized by the generalized stratigraphic sequence shown in Table 1.

Mining of the phosphate matrix (Bone Valley Member) has disturbed the undifferentiated surficial soils and Bone Valley Member comprising the original surficial aquifer system within the land area that will underlie the test road. Mining resulted in removal of much of the Bone Valley Member and placement of cast overburden into the mined-out pits over remnant unmined Bone Valley Member soils and bedclay/bedrock within the underlying undifferentiated Peace River or undifferentiated Arcadia formations. The cast overburden is comprised largely of sandy soils originally from the undifferentiated surficial soils.



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Table 1. Generalized Lithostratigraphic and Hydrostratigraphic Sequence

Series	Geologic Formation				Typical Thickness (feet)	Average Depth (feet)		Approximate Average Elevation (feet, NGVD)		Aquifer System		
						from	to	from	to			
Holocene	Undifferentiated Surficial Soils				28	0	28	+160	+132	Surficial Aquifer System		
Pleistocene												
Pliocene	Hawthorn Group	Peace River Formation	Bone Valley Member		35	28	63	+132	+97			
Miocene			Undifferentiated		17	63	80	+97	+80			
		Arcadia Formation	Undifferentiated		105	80	185	+80	-25			
			Tampa Member		65	185	250	-25	-90			
			Nocatee Member	Sand Unit	7	250	257	-90	-97			
Clay Unit		13		257	270	-97	-110					
Oligocene		Suwannee Limestone				160	270	430	-110	-270	Florida Aquifer System	Upper Floridan Aquifer
Eocene	Ocala Limestone				160	430	590	-270	-430	Semi-Confining Unit		
	Avon Park Formation				870	590	1,460	-430	-1,300	Lower Permeable Zone		
					550	1,460	2,010	-1,300	-1,850	Semi-Confining Unit		
	Oldsmar Formation				1,050	2,010	3,060	-1,850	-2,900	Middle Confining Unit		Lower Floridan Aquifer

Based on the Ad Hoc Committee (1986) hydrostratigraphic nomenclature, the aquifers underlying the proposed test road are divided into the surficial, intermediate and Floridan aquifer systems in accordance with the following delineations.

- Surficial Aquifer System.** The surficial aquifer system is the permeable hydrogeologic unit contiguous with land surface that is comprised principally of unconsolidated to poorly indurated siliciclastic deposits. The surficial aquifer system contains the water table and water within it is mainly under unconfined conditions. Beds of low permeability soil may locally cause semi-confined or confined conditions to prevail in its deeper parts. Locally perched water table



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conditions can also occur. The base of the surficial aquifer system coincides with the top of laterally extensive and vertically persistent beds of much lower permeability soil and rock in the top of the intermediate aquifer system. The base of the surficial aquifer system in the test road area corresponds to the top of the undifferentiated Peace River Formation where present or undifferentiated Arcadia Formation where the undifferentiated Peace River Formation is absent.

The transmissivity of the undisturbed surficial aquifer is in the range of 2000 gpd/ft to 3000 gpd/ft. During mining, the overburden sand, which has a hydraulic conductivity in the range of 5 to 30 ft/day, is excavated and cast into piles in the adjacent mine cut. The matrix layer, which has a saturated hydraulic conductivity in the range of 0.5 to 5 ft/day, is washed, screened, and separated into clean fine quartz sand, highly plastic clay, and sand and gravel sized phosphate particles. The sand tailings, which has a hydraulic conductivity in the range of 30 to 60 ft/day, is pumped back to the mine to fill the void space above and between the cast piles. The resulting reclaimed aquifer has a transmissivity somewhat higher than the original surficial aquifer in the direction parallel to the cast piles and a somewhat lower transmissivity than the original surficial aquifer in the direction perpendicular to the cast piles.

Groundwater flow within the surficial aquifer is controlled by ground surface topography. Natural recharge from rainfall infiltrates the aquifer in upland areas and discharges from the aquifer in low lying areas at the edge of streams and rivers. Groundwater outflow to stream systems is typically in the range of 4 to 8 inches per year. Surface runoff yields an additional 6 to 10 inches of rainwater to the stream system. Average annual rainfall equals about 53.7 inches.

Groundwater beneath the proposed test road generally flows west-southwest toward Mizelle Creek, a small tributary of the Alafia River. Roadway design will include drainage ditches on both sides of the road to drain surface runoff from the roadway and maintain trafficability during rain events. As described below, most of the less than 10 inches of water retained on or within the surface of the paved road is expected to evaporate, meaning there will be very minimal infiltration. Infiltration, if any, may be collected in the drainage ditches. One of the downgradient proposed monitoring wells will intercept any groundwater seepage before it reaches the drainage ditch.

- **Intermediate Aquifer System.** The intermediate aquifer system includes all soil and rocks that lie between and collectively retard the exchange of groundwater between the surficial aquifer system and the underlying Floridan aquifer system. The top of the intermediate aquifer system coincides with the base of the surficial aquifer system, which corresponds to the top of the undifferentiated Peace River Formation where present or undifferentiated Arcadia Formation where the undifferentiated Peace River Formation is absent. Relatively low permeability clays and carbonates within the undifferentiated Peace River and Arcadia Formations form the upper confining unit within the intermediate aquifer system. The base of the intermediate aquifer system is the top of the vertically persistent



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permeable carbonate section that comprises the Floridan aquifer system, which coincides with the base of the clay unit within the Nocatee Member and top of the Suwannee Limestone. Relatively low permeability clay at the base of the Nocatee Member of the Arcadia Formation forms the lower confining unit within the intermediate aquifer system. The intermediate aquifer system contains groundwater under confined conditions.

- Recharge to the underlying Floridan aquifer is controlled by the low permeability layers within the intermediate aquifer system. Estimates of recharge to the Floridan aquifer system are in the range of 1 to 2 inches per year (Stewart, 1966⁵; Stewart, 1980⁶.) The effective vertical hydraulic conductivity of the confining unit at the New Wales facility back-calculated from regional natural recharge and the measured head drop across the upper confining unit to be in the range of 1×10^{-7} cm/sec to less than 2×10^{-7} cm/sec.
- **Floridan Aquifer System.** The Floridan aquifer system is comprised of a thick sequence of predominately carbonates including the Eocene to Oligocene series within the Oldsmar Formation, Avon Park Formation, Ocala Limestone and Suwannee Limestone. The top of the Floridan aquifer system at the New Wales Facility coincides with the top of the Suwannee Limestone. The Floridan aquifer system is comprised of an Upper aquifer in the Suwannee and Ocala Limestones and upper part of the Avon Park Formation, and a Lower aquifer in the lower part of the Avon Park Formation and underlying Oldsmar Formation. The Upper Floridan aquifer functions regionally as the major water producing aquifer. The transmissivity of the 1200-ft thick Floridan aquifer beneath the New Wales Facility is in the range of 1.5 million to 2 million gpd/ft.

Groundwater movement within the Upper Floridan aquifer is primarily horizontal toward the Atlantic and Gulf coasts via an extensive pattern of cracks, joints, and solution cavities. The direction of flow in the Floridan aquifer beneath the New Wales facility is west toward the Gulf Coast with a gradient of 2 to 4 feet per mile. Fracture porosity is in the range of 5 to 10%.

Annual average piezometric water elevations in the Upper Floridan aquifer at the New Wales Facility is in the range of 60 to 70 feet (NGVD). Dry to wet season changes in average quarterly piezometric water elevations vary from 12 to 17 feet.

The Lower Floridan aquifer is not generally used as a source of water supply and is mineralized throughout much of Polk County. The Floridan aquifer system contains groundwater under confined conditions.

⁵ Stewart, H.G. (1966). "Groundwater Resources of Polk County", United States Geological Survey, Florida Geological Survey, Report of Investigations No. 44.

⁶ Stewart, J. W. (1980) Areas of Natural Recharge to the Floridan Aquifer in Florida, Florida Bureau of Geology Map Series 98.



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5. Groundwater usage or previous characterization of the water in the vicinity

Water quality in the surficial aquifer has been measured at several locations and at different times near the proposed PG road test site. Table 2 presents the results of historical groundwater sampling and analysis for major anions and cations in the reclaimed surficial aquifer. Table 3 presents the results of historical groundwater sampling and analysis for trace metals in the mined/reclaimed surficial aquifer (MW-44 S1 and S2) and unmined surficial aquifer (MW-45-S1 and S2).

Table 2. Groundwater Quality in Surficial Aquifer System
at Existing Monitor Wells

Parameter	MCL	NWC-35 S1			NWC-36 S1			NWC-37 S1			NWC-38 S1		
		CY 20 17	CY 20 18	Jan 20 19	CY 20 17	CY 201 8	Jan 20 19	CY 20 17	CY 201 8	Ja n 20 19	CY 20 17	CY 20 18	Jan 201 9
Water Elevation (feet, NGVD)		14 4	14 4	14 3	13 8	138	13 7	13 5	134	13 3	13 7	13 6	134
pH (std. units)	6.5- 8.5	6.3 0	6.0 1	5.9 6	6.0 8	6.0 1	5.9 0	6.1 6	6.03	5.6 3	5.7 0	5.6 6	5.3 5
Conductivity (µmhos/cm)	none	38 1	38 4	35 2	46 9	468	46 8	50 9	509	52 4	42 5	52 8	517
Total Dissolved Solids (mg/l)	500	22 4	22 7	23 2	26 8	267	30 0	29 6	303	32 3	28 4	34 8	336
Sulfate, SO ₄ (mg/l)	250	16	9	4	6	3	3	<1	3	16	<1	<1	<1
Sodium, Na (mg/l)	160	20	20	18	15	15	15	22	20	20	22	18	18
Fluoride, F (mg/l)	4.0	1.3 2	1.2 6	1.2 0	0.8 4	0.7 9	0.7 0	0.2 5	0.26	0.2 3	0.2 5	0.3 1	0.2 6
Orthophosphate, PO ₄ as P (mg/l)	none	0.9 6	0.9 9	1.0 2	0.7 5	0.8 1	0.9 1	0.9 8	0.95	0.9 9	0.9 8	0.5 5	0.5 0
Gross Alpha Particle Activity (pCi/l)	15	3.1	2.2	1.7	4.7	3.8	4.4	3.6 3	3.2	2.4	3.6	4.4	4.9



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Table 3. Trace Metals in Surficial Aquifer System

Parameter	MCL (µg/l)	April 2019 Concentrations			
		NWC-44- S1 (µg/l)	NWC-44- S2 (µg/l)	NWC-45- S1 (µg/l)	NWC-45- S2 (µg/l)
Arsenic, As	10	<6.02	<6.02	<6.02	<6.02
Barium, Ba	2,000	45.7	14.6	15.8	3.90
Cadmium, Cd	5	<0.9	<0.9	<0.9	<0.9
Chromium, Cr	100	3.90	<2	2.00	<2
Lead, Pb	15	6.80	4.60	<3	<3
Mercury, Hg	2	<0.198	<0.198	<0.198	<0.198
Selenium, Se	50	<3.8	13.0	<3.8	5.80
Aluminum, Al	200	212	54.3	88.7	55.7
Copper, Cu	1,000	<4	<4	4.40	15.8
Iron, Fe	300	743	13,400	38.6	1,220
Manganese, Mn	50	268	161	635	49.0
Silver, Ag	100	1.00	<0.5	<0.5	<0.5
Zinc, Zn	5,000	11.5	11.1	7.40	3.30

Rainwater leaching through phosphogypsum is expected to contain calcium and sulfate at concentrations of approximately 745 mg/L and 1785 mg/L, respectively. Calcium in unaffected surficial groundwater is expected to be in the range of 10 to 50 mg/L and sulfate is expected to be in the range of 5 to 15 mg/L. An increase in the concentration of calcium and sulfate will be an indication that leachate generated by rainfall infiltration passing through the PG base course has been intercepted by a monitor well. Any indication that groundwater at a downgradient monitor well has intercepted leachate from the PG base course will trigger additional sampling and analysis.

6. Design of the monitoring well network, including number, location, and depths of planned upgradient and downgradient wells

A total of six linear road test sections are currently planned. For each test section, two downgradient wells and one upgradient well (background well) will be constructed to monitor surficial groundwater quality. This will result in a total of 12 downgradient wells and 6 upgradient wells. One downgradient well will be located between the edge of each PG Test section and the stormwater drainage ditch on the side of the test road. The second downgradient well will be placed just beyond the stormwater drainage ditch.

All wells will be screened between 5 feet below the water table and 15 feet below the water table. The wells will be constructed of 2-inch diameter Schedule 40 PVC. A standard penetration test boring will be drilled at the location of each well. The test boring will be extended to the top of the undifferentiated Peace River formation.

Monitoring wells will be installed and developed in accordance with the SOP requirements of the Florida Department of Environmental Protection.



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Background samples will be obtained twice from four monitor wells and analyzed for pH, specific conductance, TDS, calcium, fluoride, sodium, sulfate, fluoride, gross alpha, radium, uranium, arsenic, cadmium, chromium, iron, lead, molybdenum, and strontium. After construction, samples will be obtained quarterly for eighteen months and tested for these same parameters. Sampling and testing will be performed by a qualified analytical laboratory with a valid NELAP certificate from the Florida Department of Environmental Protection.

7. Precipitation frequency and intensity, and expected infiltration rate through the road

The test road will consist of a compacted subbase of silty fine to fine sand overlain by a 10-inch-thick base course containing up to 50% phosphogypsum. The pavement will consist of 4-inch-thick layer of hot mix asphaltic concrete constructed to meet the specifications of the Florida Department of Transportation.

The average monthly rainfall for central Florida is presented in Table 4.

Table 4

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall	2.43	2.85	3.14	2.64	4.42	7.84	8.33	7.47	7.36	3.14	1.88	2.16

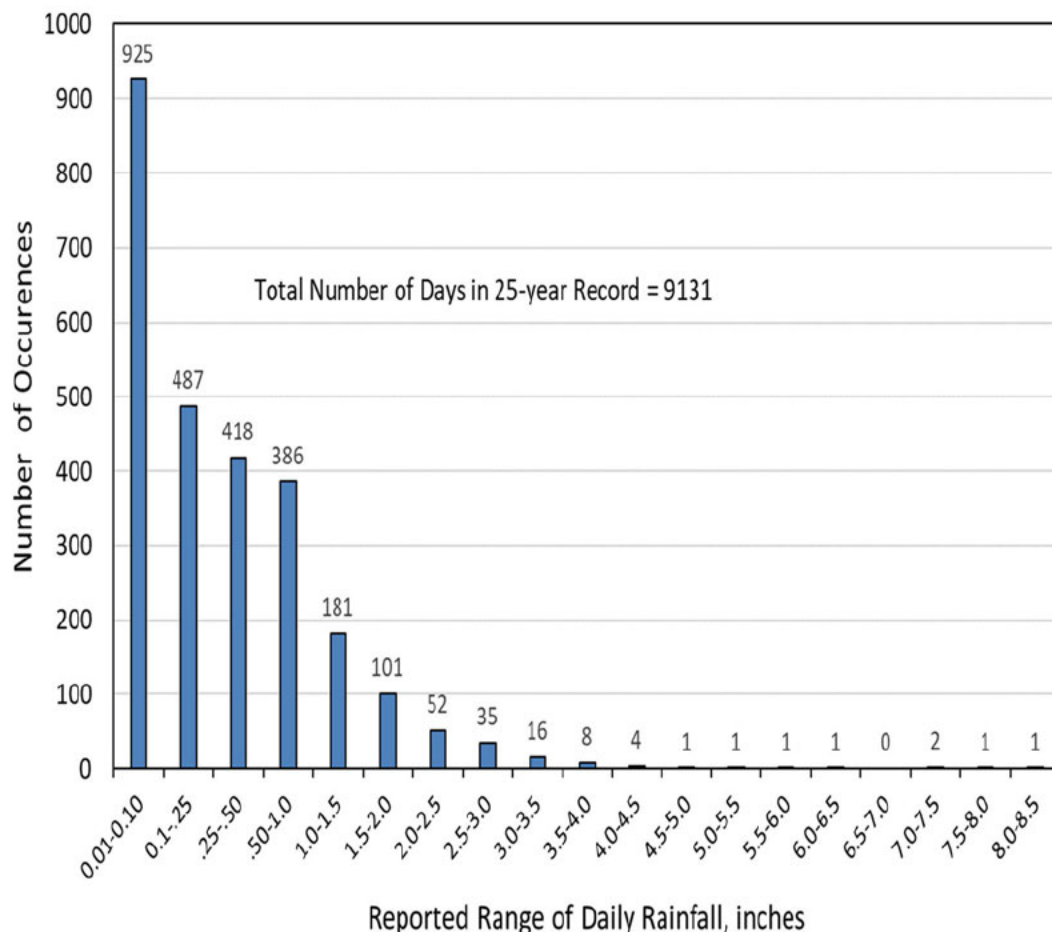
A frequency diagram of daily rainfall for a 25-year rainfall record for Wauchula, Florida is presented in Figure 3.



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Figure 3. Rainfall Frequency
25-year Rainfall Record for Wauchula, Florida



Because of the relatively low vertical hydraulic conductivity of asphaltic concrete used in Florida roadways [less than 1.0×10^{-5} cm/sec (0.014 in/hour)], the relatively low effective porosity of the asphaltic concrete (less than 5%), and the crown of the roadway (2.5%), rainfall in excess of 0.1 inch/day (corresponding to a runoff curve number of 98) is expected to run off to the roadside drainage ditches. Most of the less than ten inches of water retained on or within the surface of the pavement is expected to evaporate. Pan evaporation in central Florida exceeds 70 inches per year. Infiltration through the pavement and PG base course is expected to be less than two inches per year.

8. Radiological and non-radiological analytes to be measured

Groundwater samples will be analyzed for pH, specific conductance, TDS, calcium, fluoride, sodium, sulfate, fluoride, gross alpha, radium, uranium, arsenic, cadmium, chromium, iron, lead,



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molybdenum, and strontium. Sampling and testing will be performed by a qualified analytical laboratory with a valid NELAP certificate from the Florida Department of Environmental Protection.

9. QA/QC plans for field samples and for laboratory data

Sampling and testing will be performed by a qualified analytical laboratory with a valid NELAP certificate from the Florida Department of Environmental Protection.

10. Specific methodology planned to establish background concentrations.

Background samples will be obtained twice from all four monitor wells and analyzed for pH, specific conductance, TDS, calcium, fluoride, sodium, sulfate, fluoride, gross alpha, radium, uranium, arsenic, cadmium, chromium, iron, lead, molybdenum, and strontium. Sampling and testing will be performed by a qualified analytical laboratory with a valid NELAP certificate from the Florida Department of Environmental Protection.

Planned statistical tests and associated minimum requisite sample collection

We will measure what we evaluate using appropriate statistical tests as necessary. The dataset resulting from these analyses is expected to be readily understandable.

11. Additional information on the frequency and duration of the sampling, including decision criteria for discontinuing sampling

After construction of the test road, samples will be collected quarterly for eighteen months and tested for pH, Specific Conductance, TDS, calcium, sodium, sulfate, and gross alpha. Sampling and testing will be performed by a qualified analytical laboratory with a valid NELAP certificate from the Florida Department of Environmental Protection.

After eighteen months, sampling will be discontinued. If an increasing trend in the concentrations of the monitored parameters is observed, the parameter list will be increased to include radium, uranium, arsenic, cadmium, chromium, and lead.

A detailed soil sampling plan, including:

Soils will be sampled before and after construction of the road and these plans will be included as part of the request provided to FDEP. Below are the current plans for soil sampling.

12. The number and location of proposed samples.

Before the road is constructed, soil samples will be collected with a hand auger (to a depth of 1 ft) on each side of the road, 2 locations for each test section. This will result in 24 soil sample locations. A matching set of samples will be collected after road construction, and another after the road has been in operation for one year.



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13. The specific sample collection protocol to be used (including whether sampling to the proposed depth of 12" will be accomplished using multiple lifts).

At each sample location, the top 12 inches of soil will be collected with a hand auger. At each sample location three samples will be collected: 0-3 inches, 3-6 inches, 6-12 inches.

14. Radiological and non-radiological analytes to be measured

Soils will be analyzed for Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Ti, Sr, V, Zn, and Ra-226.

Any plans to sample surface runoff and/or the unsaturated zone.

We do not plan on collecting surface runoff. Based on site conditions we do not expect standing surface water to be common. We will be using the soil sample and groundwater sample results to assess migration of constituents, if any, from the road. The road will be paved with asphalt pavement. Because of the relatively low vertical hydraulic conductivity of asphaltic concrete used in Florida roadways [less than 1.0×10^{-5} cm/sec (0.014 in/hour)], the relatively low effective porosity of the asphaltic concrete (less than 5%), and the crown of the roadway (2.5%), rainfall in excess of 0.1 inch/day (corresponding to a runoff curve number of 98) is expected to run off to the roadside drainage ditches. Most of the less than ten inches of water retained on or within the surface of the pavement is expected to evaporate. Pan evaporation in central Florida exceeds 70 inches per year. Infiltration through the pavement and PG base course is expected to be less than two inches per year.

We do not plan on sampling the unsaturated zone. Based on our conversations with FDEP we plan on construction lined lysimeters at one location under each section of road to collect any liquids that migrate through the roads (pavement over road base).

Any consideration of the effects of flooding or water infiltration on a roadbed containing phosphogypsum.

The road is being designed and permitted so that the bottom of the base must remain multiple feet above the seasonal high- water table.

DocuSigned by:

Pat Kane

12/20/2022

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